```
=>

L1      STRUCTURE UPLOADED

=> s l1 sss sam
SAMPLE SEARCH INITIATED 16:28:29 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -       30 TO ITERATE

100.0% PROCESSED       30 ITERATIONS                              1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          272 TO      928
PROJECTED ANSWERS:               1 TO       80

L2            1 SEA SSS SAM L1

=> d scan

=> s l1 sss full
FULL SEARCH INITIATED 16:28:39 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      638 TO ITERATE

100.0% PROCESSED      638 ITERATIONS                             61 ANSWERS
SEARCH TIME: 00.00.01

L3           61 SEA SSS FUL L1

=> s l3
L4           29 L3

=> s l3/DEV
             29 L3
        790746 DEV/RL
L5           13 L3/DEV
                (L3 (L) DEV/RL)

=> d ibib abs hitstr 1-
YOU HAVE REQUESTED DATA FROM 13 ANSWERS - CONTINUE? Y/(N):y

=>

L6      STRUCTURE UPLOADED

=> s l6 sss full
FULL SEARCH INITIATED 16:38:14 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      386 TO ITERATE

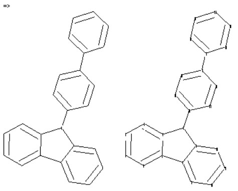
100.0% PROCESSED      386 ITERATIONS                             11 ANSWERS
SEARCH TIME: 00.00.01

L7           11 SEA SSS FUL L6

=> s l7
L8            7 L7

=> d ibib abs hitstr 1-
YOU HAVE REQUESTED DATA FROM 7 ANSWERS - CONTINUE? Y/(N):y

=>
```



```
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
chain bonds :
7-14 17-20
ring bonds :
1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-9 7-8 8-9 8-10 9-13 10-11 11-12 12-13 14-15 14-19 15-16 16-17 17-18 18-19 20-21 20-25 21-22 22-23 23-24 24-25
exact/norm bonds :
4-7 5-9 7-8 7-14
exact bonds :
17-20
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-10 9-13 10-11 11-12 12-13 14-15 14-19 15-16 16-17 17-18 18-19 20-21 20-25 21-22 22-23 23-24 24-25
isolated ring systems :
containing 14 : 20 :


Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom 22:Atom
23:Atom 24:Atom 25:Atom



L1      STRUCTURE UPLOADED

=> s l1 sss sam
SAMPLE SEARCH INITIATED 09:11:09 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -     1612 TO ITERATE

100.0% PROCESSED     1612 ITERATIONS                             39 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        29832 TO    34648
PROJECTED ANSWERS:             406 TO     1154

L2           39 SEA SSS SAM L1
```

```
=> d scan

=> s l1 sss full
FULL SEARCH INITIATED 09:11:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -    32003 TO ITERATE

100.0% PROCESSED    32003 ITERATIONS                            894 ANSWERS
SEARCH TIME: 00.00.02

L3          894 SEA SSS FUL L1

=> s l3
L4         1859 L3

=> l3 and (electroluminescence or electroluminescent or OLED or (light emitting))
          1859 L3
         26421 ELECTROLUMINESCENCE
            29 ELECTROLUMINESCENCES
         26425 ELECTROLUMINESCENCE
                 (ELECTROLUMINESCENCE OR ELECTROLUMINESCENCES)
             5 ELECTROLUMINESCENSE
         26426 ELECTROLUMINESCENCE
                 (ELECTROLUMINESCENCE OR ELECTROLUMINESCENSE)
         89709 ELECTROLUMINESCENT
             8 ELECTROLUMINESCENTS
         89712 ELECTROLUMINESCENT
                 (ELECTROLUMINESCENT OR ELECTROLUMINESCENTS)
          7457 OLED
          3717 OLEDS
          9350 OLED
                 (OLED OR OLEDS)
       1331320 LIGHT
         12578 LIGHTS
       1335544 LIGHT
                 (LIGHT OR LIGHTS)
        139582 EMITTING
           217 EMITTINGS
        139626 EMITTING
                 (EMITTING OR EMITTINGS)
         75726 LIGHT EMITTING
                 (LIGHT(W)EMITTING)
L5        1724 L3 AND (ELECTROLUMINESCENCE OR ELECTROLUMINESCENT OR OLED OR
               (LIGHT EMITTING))

=> logoff
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y

     (FILE 'HOME' ENTERED AT 09:08:53 ON 08 DEC 2009)

     FILE 'REGISTRY' ENTERED AT 09:09:44 ON 08 DEC 2009
L1              STRUCTURE UPLOADED
L2           39 SEA FILE=REGISTRY SSS SAM L1
L3          894 SEA FILE=REGISTRY SSS FUL L1

     FILE 'CAPLUS' ENTERED AT 09:11:35 ON 08 DEC 2009
L4         1859 SEA FILE=CAPLUS SPE=ON  ABB=ON  PLU=ON  L3
L5         1724 SEA FILE=CAPLUS SPE=ON  ABB=ON  PLU=ON  L3 AND (ELECTROLUMINESC
                ENCE OR ELECTROLUMINESCENT OR OLED OR (LIGHT EMITTING))
COST IN U.S. DOLLARS                               SINCE FILE      TOTAL
                                                        ENTRY    SESSION
FULL ESTIMATED COST                                     12.20     199.48

STN INTERNATIONAL LOGOFF AT 09:12:32 ON 08 DEC 2009


Connecting via Winsock to STN



Welcome to STN International!  Enter x:X

LOGINID:SSPTAAKB1794

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

=>
```

```
chain nodes :
27 35 36
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 28 29 30 31 32 33
chain bonds :
2-35 12-27 15-27 25-36 27-28
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 8-10 9-13 10-11 11-12 12-13 14-15 14-19 15-16 16-17 17-18 18-19 18-20 19-22 20-21 21-22 21-23 22-26 23-24 24-25 25-26 28-29 28-33
29-30 30-31 31-32 32-33
exact/norm bonds :
2-35 5-7 7-8 12-27 15-27 18-20 20-21 25-36 27-28
exact bonds :
6-9 19-22
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-10 9-13 10-11 11-12 12-13 14-15 14-19 15-16 16-17 17-18 18-19 21-22 21-23 22-26 23-24 24-25 25-26 28-29 28-33 29-30 30-31 31-32 32-33
```

```
isolated ring systems :
containing 1 : 14 :


G1:H,Cb,Ak

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom 22:Atom
23:Atom 24:Atom 25:Atom 26:Atom 27:CLASS 28:Atom 29:Atom 30:Atom 31:Atom 32:Atom 33:Atom 35:CLASS 36:CLASS



L1      STRUCTURE UPLOADED

=> s l1 sss full
FULL SEARCH INITIATED 16:41:46 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     1049 TO ITERATE

100.0% PROCESSED     1049 ITERATIONS                             69 ANSWERS
SEARCH TIME: 00.00.01

L2           69 SEA SSS FUL L1

=> s l2
L3           41 L2

=> l3 and (py<2005 or ay<2005)
      25158088 PY<2005
       5164954 AY<2005
L4           20 L3 AND (PY<2005 OR AY<2005)

=> d ibib abs hitstr 1-
YOU HAVE REQUESTED DATA FROM 20 ANSWERS - CONTINUE? Y/(N):y

=> logoff
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y

     (FILE 'HOME' ENTERED AT 16:39:24 ON 10 MAY 2010)

     FILE 'REGISTRY' ENTERED AT 16:41:21 ON 10 MAY 2010
L1              STRUCTURE UPLOADED
L2           69 SEA FILE=REGISTRY SSS FUL L1

     FILE 'CAPLUS' ENTERED AT 16:41:50 ON 10 MAY 2010
L3           41 SEA FILE=CAPLUS SPE=ON  ABB=ON  PLU=ON  L2
L4           20 SEA FILE=CAPLUS SPE=ON  ABB=ON  PLU=ON  L3 AND (PY<2005 OR
                AY<2005)
                D IBIB ABS HITSTR 1-

     FILE 'STNGUIDE' ENTERED AT 16:48:50 ON 10 MAY 2010
COST IN U.S. DOLLARS                               SINCE FILE      TOTAL
                                                        ENTRY    SESSION
FULL ESTIMATED COST                                      3.22     322.24

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)         SINCE FILE      TOTAL
                                                        ENTRY    SESSION
CA SUBSCRIBER PRICE                                      0.00     -17.00

STN INTERNATIONAL LOGOFF AT 17:16:20 ON 10 MAY 2010


Connecting via Winsock to STN



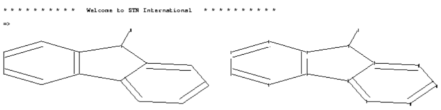
Welcome to STN International!  Enter x:X

LOGINID:SSPTAAKB1794

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

=>
```



```
chain nodes :
14
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds :
7-14
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 8-10 9-13 10-11 11-12 12-13
exact/norm bonds :
5-7 7-8 7-14
exact bonds :
6-9
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-10 9-13 10-11 11-12 12-13
isolated ring systems :
containing 1 :


Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:CLASS



L1      STRUCTURE UPLOADED

=> s l1 sss full
FULL SEARCH INITIATED 16:14:44 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   145895 TO ITERATE

100.0% PROCESSED   145895 ITERATIONS                          42437 ANSWERS
SEARCH TIME: 00.00.01

L2        42437 SEA SSS FUL L1
```

```
=> s l2
L3        21956 L2

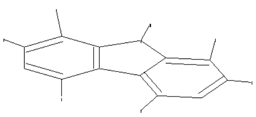
=> l3 and (electroluminescence or electroluminescent or (light emitting) or OLED)
         30260 ELECTROLUMINESCENCE
            29 ELECTROLUMINESCENCES
         30264 ELECTROLUMINESCENCE
                 (ELECTROLUMINESCENCE OR ELECTROLUMINESCENCES)
             5 ELECTROLUMINESCENSE
         30265 ELECTROLUMINESCENCE
                 (ELECTROLUMINESCENCE OR ELECTROLUMINESCENSE)
        112581 ELECTROLUMINESCENT
             8 ELECTROLUMINESCENTS
        112584 ELECTROLUMINESCENT
                 (ELECTROLUMINESCENT OR ELECTROLUMINESCENTS)
       1487936 LIGHT
         14786 LIGHTS
       1492837 LIGHT
                 (LIGHT OR LIGHTS)
        172270 EMITTING
           298 EMITTINGS
        172334 EMITTING
                 (EMITTING OR EMITTINGS)
         99377 LIGHT EMITTING
                 (LIGHT(W)EMITTING)
          9990 OLED
          4916 OLEDS
         12427 OLED
                 (OLED OR OLEDS)
L4        4013 L3 AND (ELECTROLUMINESCENCE OR ELECTROLUMINESCENT OR (LIGHT EMIT
               TING) OR OLED)

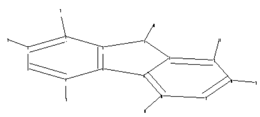
=> l4 and (py<=2005)
      26347246 PY<=2005
L5        2072 L4 AND (PY<=2005)

=> l4 and ((hole transporting) or (hole injection) or (hole transportation) or (hole injecting) or (charge injection) or (charge transporting) or (charge injecting) or
(charge transportation))
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
         66271 TRANSPORTING
          5470 HOLE TRANSPORTING
                 (HOLE(W)TRANSPORTING)
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
        647512 INJECTION
        158799 INJECTIONS
        743173 INJECTION
                 (INJECTION OR INJECTIONS)
          5442 HOLE INJECTION
                 (HOLE(W)INJECTION)
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
         54185 TRANSPORTATION
           113 TRANSPORTATIONS
         54261 TRANSPORTATION
                 (TRANSPORTATION OR TRANSPORTATIONS)
           118 HOLE TRANSPORTATION
                 (HOLE(W)TRANSPORTATION)
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
         62891 INJECTING
          1136 HOLE INJECTING
                 (HOLE(W)INJECTING)
        664709 CHARGE
         86040 CHARGES
        712221 CHARGE
                 (CHARGE OR CHARGES)
        647512 INJECTION
        158799 INJECTIONS
        743173 INJECTION
                 (INJECTION OR INJECTIONS)
          4036 CHARGE INJECTION
                 (CHARGE(W)INJECTION)
        664709 CHARGE
         86040 CHARGES
        712221 CHARGE
                 (CHARGE OR CHARGES)
         66271 TRANSPORTING
          8780 CHARGE TRANSPORTING
                 (CHARGE(W)TRANSPORTING)
        664709 CHARGE
         86040 CHARGES
        712221 CHARGE
                 (CHARGE OR CHARGES)
         62891 INJECTING
           165 CHARGE INJECTING
                 (CHARGE(W)INJECTING)
        664709 CHARGE
         86040 CHARGES
        712221 CHARGE
                 (CHARGE OR CHARGES)
         54185 TRANSPORTATION
           113 TRANSPORTATIONS
         54261 TRANSPORTATION
                 (TRANSPORTATION OR TRANSPORTATIONS)
           151 CHARGE TRANSPORTATION
                 (CHARGE(W)TRANSPORTATION)
L6         934 L4 AND ((HOLE TRANSPORTING) OR (HOLE INJECTION) OR (HOLE TRANSPO
               RTATION) OR (HOLE INJECTING) OR (CHARGE INJECTION) OR (CHARGE
               TRANSPORTING) OR (CHARGE INJECTING) OR (CHARGE TRANSPORTATION))

=> l6 and (py<=2005)
      26347246 PY<=2005
L7         513 L6 AND (PY<=2005)

=>
```





```
chain nodes :
14 16 17 18 19 20 21
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds :
1-18 3-17 4-16 7-14 10-21 11-20 13-19
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 8-10 9-13 10-11 11-12 12-13
exact/norm bonds :
5-7 7-8 7-14
exact bonds :
1-18 3-17 4-16 6-9 10-21 11-20 13-19
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-10 9-13 10-11 11-12 12-13
isolated ring systems :
containing 1 :


Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS



L8      STRUCTURE UPLOADED

=> s l8 sss full
FULL SEARCH INITIATED 16:19:24 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   145895 TO ITERATE

100.0% PROCESSED   145895 ITERATIONS                          35238 ANSWERS
SEARCH TIME: 00.00.01

L9        35238 SEA SSS FUL L8

=> s l9
L10       20922 L9

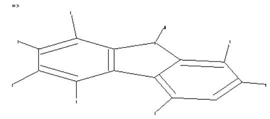
=> l10 and (electroluminescence or electroluminescent or (light emitting) or OLED)
         30260 ELECTROLUMINESCENCE
            29 ELECTROLUMINESCENCES
         30264 ELECTROLUMINESCENCE
                 (ELECTROLUMINESCENCE OR ELECTROLUMINESCENCES)
             5 ELECTROLUMINESCENSE
         30265 ELECTROLUMINESCENCE
                 (ELECTROLUMINESCENCE OR ELECTROLUMINESCENSE)
        112581 ELECTROLUMINESCENT
             8 ELECTROLUMINESCENTS
        112584 ELECTROLUMINESCENT
                 (ELECTROLUMINESCENT OR ELECTROLUMINESCENTS)
       1487936 LIGHT
         14786 LIGHTS
       1492837 LIGHT
                 (LIGHT OR LIGHTS)
        172270 EMITTING
           298 EMITTINGS
        172334 EMITTING
                 (EMITTING OR EMITTINGS)
         99377 LIGHT EMITTING
                 (LIGHT(W)EMITTING)
          9990 OLED
          4916 OLEDS
         12427 OLED
                 (OLED OR OLEDS)
L11       3898 L10 AND (ELECTROLUMINESCENCE OR ELECTROLUMINESCENT OR (LIGHT
               EMITTING) OR OLED)

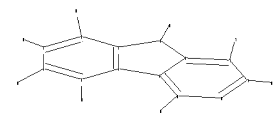
=> l11 and ((hole transporting) or (hole injection) or (hole transportation) or (hole injecting) or (charge injection) or (charge transporting) or (charge injecting) or
(charge transportation))
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
         66271 TRANSPORTING
          5470 HOLE TRANSPORTING
                 (HOLE(W)TRANSPORTING)
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
        647512 INJECTION
        158799 INJECTIONS
        743173 INJECTION
                 (INJECTION OR INJECTIONS)
          5442 HOLE INJECTION
                 (HOLE(W)INJECTION)
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
         54185 TRANSPORTATION
           113 TRANSPORTATIONS
         54261 TRANSPORTATION
                 (TRANSPORTATION OR TRANSPORTATIONS)
           118 HOLE TRANSPORTATION
                 (HOLE(W)TRANSPORTATION)
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
         62891 INJECTING
          1136 HOLE INJECTING
                 (HOLE(W)INJECTING)
        664709 CHARGE
         86040 CHARGES
        712221 CHARGE
                 (CHARGE OR CHARGES)
        647512 INJECTION
        158799 INJECTIONS
        743173 INJECTION
                 (INJECTION OR INJECTIONS)
          4036 CHARGE INJECTION
                 (CHARGE(W)INJECTION)
        664709 CHARGE
         86040 CHARGES
        712221 CHARGE
                 (CHARGE OR CHARGES)
         66271 TRANSPORTING
          8780 CHARGE TRANSPORTING
                 (CHARGE(W)TRANSPORTING)
        664709 CHARGE
         86040 CHARGES
        712221 CHARGE
                 (CHARGE OR CHARGES)
         62891 INJECTING
           165 CHARGE INJECTING
                 (CHARGE(W)INJECTING)
        664709 CHARGE
         86040 CHARGES
        712221 CHARGE
                 (CHARGE OR CHARGES)
         54185 TRANSPORTATION
           113 TRANSPORTATIONS
         54261 TRANSPORTATION
                 (TRANSPORTATION OR TRANSPORTATIONS)
           151 CHARGE TRANSPORTATION
                 (CHARGE(W)TRANSPORTATION)
L12        910 L11 AND ((HOLE TRANSPORTING) OR (HOLE INJECTION) OR (HOLE TRANSP
               ORTATION) OR (HOLE INJECTING) OR (CHARGE INJECTION) OR (CHARGE
               TRANSPORTING) OR (CHARGE INJECTING) OR (CHARGE TRANSPORTATION))

=> l12 and (py<=2005)
      26347246 PY<=2005
L13        503 L12 AND (PY<=2005)

=> l12 and (py<=2004)
      25164147 PY<=2004
L14        445 L12 AND (PY<=2004)

=>
```





```
chain nodes :
14 16 17 18 19 20 21 22
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds :
1-18 2-22 3-17 4-16 7-14 10-21 11-20 13-19
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 8-10 9-13 10-11 11-12 12-13
exact/norm bonds :
5-7 7-8 7-14
exact bonds :
1-18 2-22 3-17 4-16 6-9 10-21 11-20 13-19
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-10 9-13 10-11 11-12 12-13
isolated ring systems :
containing 1 :


Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS



L15      STRUCTURE UPLOADED

=> s l15 sss full
FULL SEARCH INITIATED 16:21:34 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   145895 TO ITERATE

100.0% PROCESSED   145895 ITERATIONS                          27972 ANSWERS
SEARCH TIME: 00.00.01

L16        27972 SEA SSS FUL L15

=> s l16
L17       19080 L16

=> l17 and (electroluminescence or electroluminescent or (light emitting) or OLED)
         30260 ELECTROLUMINESCENCE
            29 ELECTROLUMINESCENCES
         30264 ELECTROLUMINESCENCE
                 (ELECTROLUMINESCENCE OR ELECTROLUMINESCENCES)
             5 ELECTROLUMINESCENSE
         30265 ELECTROLUMINESCENCE
                 (ELECTROLUMINESCENCE OR ELECTROLUMINESCENSE)
        112581 ELECTROLUMINESCENT
             8 ELECTROLUMINESCENTS
        112584 ELECTROLUMINESCENT
                 (ELECTROLUMINESCENT OR ELECTROLUMINESCENTS)
       1487936 LIGHT
         14786 LIGHTS
       1492837 LIGHT
                 (LIGHT OR LIGHTS)
        172270 EMITTING
           298 EMITTINGS
        172334 EMITTING
                 (EMITTING OR EMITTINGS)
         99377 LIGHT EMITTING
                 (LIGHT(W)EMITTING)
          9990 OLED
          4916 OLEDS
         12427 OLED
                 (OLED OR OLEDS)
L18       3548 L17 AND (ELECTROLUMINESCENCE OR ELECTROLUMINESCENT OR (LIGHT
               EMITTING) OR OLED)

=> l17 and (electroluminescence or electroluminescent or OLED)
         30260 ELECTROLUMINESCENCE
            29 ELECTROLUMINESCENCES
         30264 ELECTROLUMINESCENCE
                 (ELECTROLUMINESCENCE OR ELECTROLUMINESCENCES)
             5 ELECTROLUMINESCENSE
         30265 ELECTROLUMINESCENCE
                 (ELECTROLUMINESCENCE OR ELECTROLUMINESCENSE)
        112581 ELECTROLUMINESCENT
             8 ELECTROLUMINESCENTS
        112584 ELECTROLUMINESCENT
                 (ELECTROLUMINESCENT OR ELECTROLUMINESCENTS)
          9990 OLED
          4916 OLEDS
         12427 OLED
                 (OLED OR OLEDS)
L19       3462 L17 AND (ELECTROLUMINESCENCE OR ELECTROLUMINESCENT OR OLED)

=> l18 and (py<=2004)
      25164147 PY<=2004
L20       1617 L18 AND (PY<=2004)

=> l18 and ((hole transporting) or (hole injection) or (hole transportation) or (hole injecting) or (charge injection) or (charge transporting) or (charge injecting) or
(charge transportation))
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
         66271 TRANSPORTING
          5470 HOLE TRANSPORTING
                 (HOLE(W)TRANSPORTING)
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
        647512 INJECTION
        158799 INJECTIONS
        743173 INJECTION
                 (INJECTION OR INJECTIONS)
          5442 HOLE INJECTION
                 (HOLE(W)INJECTION)
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
         54185 TRANSPORTATION
           113 TRANSPORTATIONS
         54261 TRANSPORTATION
                 (TRANSPORTATION OR TRANSPORTATIONS)
           118 HOLE TRANSPORTATION
                 (HOLE(W)TRANSPORTATION)
        337297 HOLE
        204257 HOLES
        457590 HOLE
                 (HOLE OR HOLES)
         62891 INJECTING
          1136 HOLE INJECTING
                 (HOLE(W)INJECTING)
        664709 CHARGE
         86040 CHARGES
        712221 CHARGE
                 (CHARGE OR CHARGES)
        647512 INJECTION
        158799 INJECTIONS
        743173 INJECTION
                 (INJECTION OR INJECTIONS)
          4036 CHARGE INJECTION
                 (CHARGE(W)INJECTION)
        664709 CHARGE
         86040 CHARGES
        712221 CHARGE
                 (CHARGE OR CHARGES)
         66271 TRANSPORTING
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                 (CHARGE(W)TRANSPORTING)
        664709 CHARGE
         86040 CHARGES
        712221 CHARGE
                 (CHARGE OR CHARGES)
         62891 INJECTING
           165 CHARGE INJECTING
                 (CHARGE(W)INJECTING)
        664709 CHARGE
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                 (CHARGE OR CHARGES)
         54185 TRANSPORTATION
           113 TRANSPORTATIONS
         54261 TRANSPORTATION
                 (TRANSPORTATION OR TRANSPORTATIONS)
           151 CHARGE TRANSPORTATION
                 (CHARGE(W)TRANSPORTATION)
L21        823 L18 AND ((HOLE TRANSPORTING) OR (HOLE INJECTION) OR (HOLE TRANSP
               ORTATION) OR (HOLE INJECTING) OR (CHARGE INJECTION) OR (CHARGE
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L22        412 L21 AND (PY<=2004)

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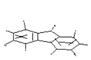

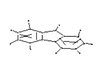

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14 16 17 18 19 20 21 22 23
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds :
1-18 2-22 3-17 4-16 7-14 10-21 11-20 12-23 13-19
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 8-10 9-13 10-11 11-12 12-13
exact/norm bonds :
2-22 5-7 7-8 7-14 12-23
exact bonds :
1-18 3-17 4-16 6-9 10-21 11-20 13-19
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-10 9-13 10-11 11-12 12-13
isolated ring systems :
containing 1 :


G1:Cb,Hy,Ak,N

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS
23:CLASS



L23      STRUCTURE UPLOADED

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100.0% PROCESSED      7349 ITERATIONS                            50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE   **COMPLETE**
                        BATCH    **COMPLETE**
PROJECTED ITERATIONS:       141840 TO   152120
PROJECTED ANSWERS:            4396 TO     6364

L24            50 SEA SSS SAM L23

=> s l24
L25           36 L24

=> d ibib abs hitstr 1-
YOU HAVE REQUESTED DATA FROM 36 ANSWERS - CONTINUE? Y/(N):y
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L25 ANSWER 1 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
    2011:1235910 CAPLUS Full-text

Document Number
    155:484171

Title
    Carbazole linked pyrrolo[2,1-c][1,4]benzodiazepine hybrids as potential anticancer agents and process for the preparation thereof

Author/Inventor
    Kamal, Ahmed; Shetti, Rajesh V. C. R. N. C.; Reddy, Srinivasa K.; Reddy, Adla Malla

Patent Assignee/Corporate Source
    Council of Scientific & Industrial Research, India

Source
    PCT Int. Appl., 63pp. CODEN: PIXXD2

Document Type
    Patent

Language
    English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2011117668	A1	20110929	WO 2010-IB3087	20101203

Abstract
    The invention relates to carbazole linked pyrrolo[2,1-c][1,4]benzodiazepine hybrids of formula I, which are useful as potential antitumor agents against human cancer cell lines. The invention further provides a process for the preparation of compds. of formula I. Compds. of formula I wherein R is H and (un)substituted Ph; X is (CH2)1-7 and formula II; n and p are independently 2 to 6; are claimed. Example compound III was prepared by amination of compound IV with carbazole; the resulting 4-(carbazolylalkoxy)-2-nitrobenzoylpyrrolidine derivative underwent reduction to give the 2-aminobenzoylpyrrolidine derivative, which underwent cyclization to give compound III. All the invention compds. were evaluated for their anticancer activity (data given).

Hit Structure

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CAS Registry Number
1335249-04-1   CAPLUS


Chemical or Trade Name
5H-Pyrrolo[2,1-c][1,4]benzodiazepin-5-one,
8-[3-[3,6-bis(4-chlorophenyl)-9H-carbazol-9-yl]propoxy]-1,2,3,11a-
tetrahydro-7-methoxy-, (11aS)-  (CA INDEX NAME)
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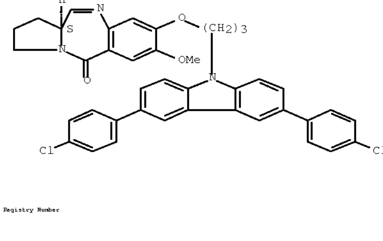
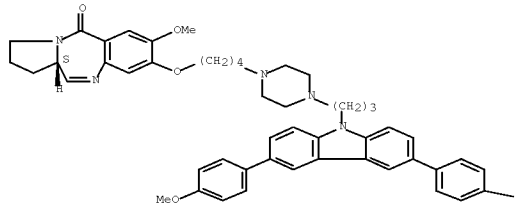


CAS Registry Number

1335249-17-6 CAPLUS

Chemical or Trade Name
5H-Pyrrolo[2,1-c][1,4]benzodiazepin-5-one,
8-[4-[4-[3,6-bis(4-methoxyphenyl)-9H-carbazol-9-yl]propyl]-1-
piperazinyl]butoxy]-1,2,3,11a-tetrahydro-7-methoxy-, (11aS)- (CA INDEX
NAME)

PAGE 1-A

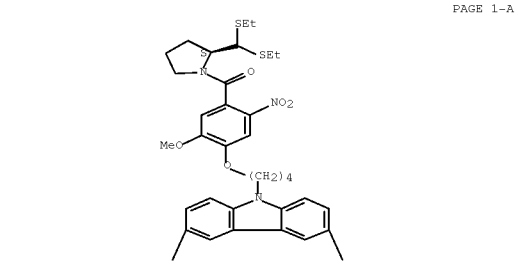


PAGE 1-B

CAS Registry Number
1335249-37-6 CAPLUS

Chemical or Trade Name
5H-Pyrrolo[2,1-c][1,4]benzodiazepin-5-one,
8-[4-[4-[3,6-bis(4-chlorophenyl)-9H-carbazol-9-yl]butyl]-1-
piperazinyl]butoxy]-1,2,3,11a-tetrahydro-7-methoxy-, (11aS)- (CA INDEX
NAME)

PAGE 1-A



PAGE 2-A

CAS Registry Number
1335249-59-8 CAPLUS

Chemical or Trade Name
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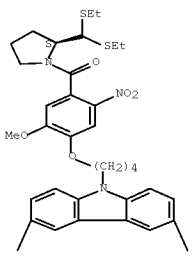
methoxy-2-nitrophenyl][(2S)-2-[bis(ethylthio)methyl]-1-pyrrolidinyl]- (CA
INDEX NAME)

PAGE 1-A



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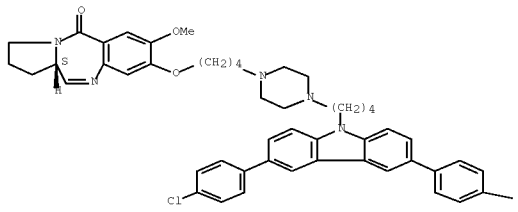

PAGE 1-B

CAS Registry Number
1335249-50-7 CAPLUS

Chemical or Trade Name
Methanone, [(2S)-2-[bis(ethylthio)methyl]-1-pyrrolidinyl][4-[4-[3,6-bis(4-
methoxyphenyl)-9H-carbazol-9-yl]butoxy]-5-methoxy-2-nitrophenyl]- (CA
INDEX NAME)

PAGE 2-A

CAS Registry Number
1335249-70-1 CAPLUS

Chemical or Trade Name
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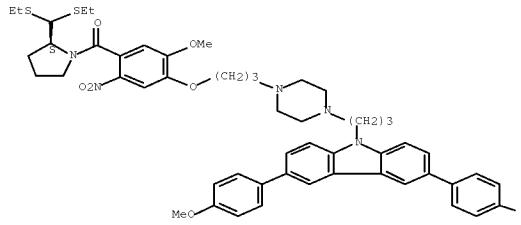

PAGE 1-B

CAS Registry Number
1335249-75-6 CAPLUS

Chemical or Trade Name
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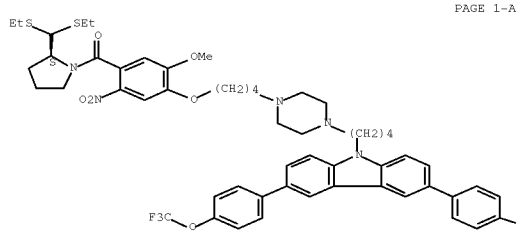
bis[4-(trifluoromethoxy)phenyl]-9H-carbazol-9-yl]butyl]-1-
piperazinyl]butoxy]-5-methoxy-2-nitrophenyl]- (CA INDEX NAME)

PAGE 1-A

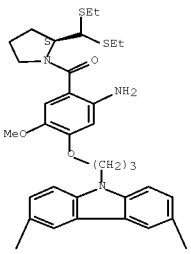


PAGE 1-B

CAS Registry Number
1335849-89-2 CAPLUS

Chemical or Trade Name
Methanone, [2-amino-4-[3-[3,6-bis[4-(trifluoromethoxy)phenyl]-9H-carbazol-9-yl]propoxy]-5-methoxyphenyl][2S)-2-[bis(ethylthio)methyl]-1-pyrrolidinyl]- (CA INDEX NAME)

PAGE 1-A



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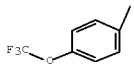

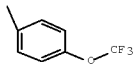

CAS Registry Number
1335849-90-5 CAPLUS

Chemical or Trade Name
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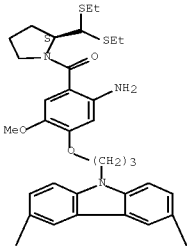

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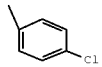
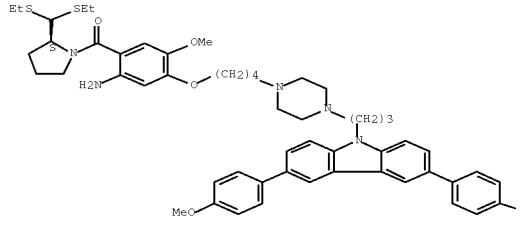


CAS Registry Number
1335850-00-2 CAPLUS

Chemical or Trade Name
Methanone, [2-amino-4-[4-[3-[3,6-bis(4-methoxyphenyl)-9H-carbazol-9-yl]propyl]-1-piperazinyl]butoxy]-5-methoxyphenyl][(2S)-2-[bis(ethylthio)methyl]-1-pyrrolidinyl]- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

L25 ANSWER 2 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:1162706 CAPLUS Full-text
Document Number
155:464606
Title
Solution-processable π-conjugated dendrimers with hole-transporting, electroluminescent and fluorescent pattern properties
Author(s)
Li, Zhongjian; Jiang, Zaoquan; Ye, Shanghui; Jim, Cathy K. W.; Yu, Gui; Liu, Yunqi; Qin, Jingui; Tang, Ben Zhong; Li, Zhen
Patent Assignee(s)/Corporate Source
Department of Chemistry, Hubei Key Lab on Organic and Polymeric Opto-Electronic Materials, Wuhan University, Wuhan, 430072, Peop. Rep. China
Source
Journal of Materials Chemistry (2011), 21(38), 14683-14691 CODEN: JMACEP; ISSN: 0959-9428
Document Type
Journal; (online computer file)
Language
English
Abstract
In this paper, four new π-conjugated dendrimers G1 and G2-1-G2-3, constructed by triphenylamine and carbazole moieties, have been successfully prepared via a simple synthetic route. This mol. design imparts the materials with good solution-processability, high thermal and morphol. stabilities, and low oxidation potential, all of which are promising properties for optoelectronic materials. The double-layer OLEDs fabricated using these materials through solution processing demonstrate that they can exhibit dual functions, hole-transporting and light-emitting. Devices using G1 or G2-1 as the hole-transporting layer present good stability during the passage of current, with a maximum efficiency of 1.70 and 1.59 cd A-1, resp. Moreover, devices using these dendrimers as the emitting layer show moderate performance, and the device of G2-2 gives a maximum luminance and efficiency of 1190 cd m-2 and 1.67 cd A-1, resp., thanks to three-dimensional building of the dendritic system, which might suppress the inherent reductive or aggregation-caused quenching that usually happens for triphenylamine/carbazole derivs. to some degree. Also, the photo-crosslinking property of triple bonds enables ready fabrication of highly fluorescent photoresist patterns of these dendrimers.
Hit Structure
CAS Registry Number
1335841-97-6 CAPLUS

Chemical or Trade Name
INDEX NAME NOT YET ASSIGNED

CM
1

CRN 1335841-84-3
CMF C140 H131 N7

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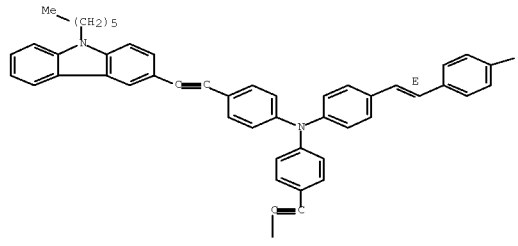

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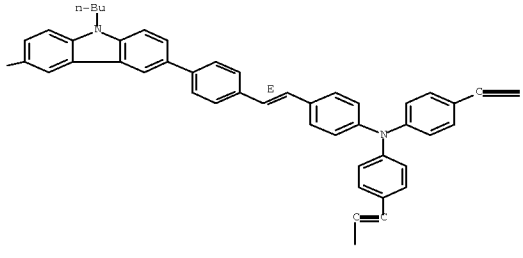

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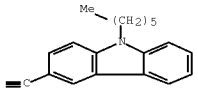

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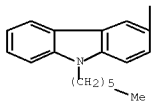

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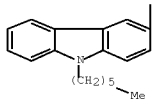
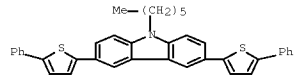


L25 ANSWER 3 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:1051032 CAPLUS Full-text
Document Number
155:497356
Title
Two-photon absorption dyes with thiophene as π-electron bridge: Synthesis, photophysical properties and optical data storage
Author(s)/Inventor
Zhou, Hongping; Zhou, Feixia; Tang, Shiya; Wu, Peng; Chen, Yixin; Tu, Yulong; Wu, Jieying; Tian, Yupeng
Patent Assignee/Corporate Source
Department of Chemistry, Anhui University and Key Laboratory of Functional Inorganic Materials Chemistry of Anhui Province, Hefei, 230039, Peop. Rep. China
Source
Dyes and Pigments (2012), 92(1), 633-641 CODEN: DYPIDX; ISSN: 0143-7208
Document Type
Journal; (online computer file)
Language
English
Abstract
Four novel dyes are prepared by thiophene as π-bridge between carbazole central core and other terminal groups by Suzuki and Heck coupling reactions. These dyes are fully characterized by IR, 1H NMR, 13C NMR, MS and elemental anal. Linear absorption, single- and two-photon excited fluorescence in various solvents are explr. investigated. The calculated two-photon absorption cross-sections of 9-Hexyl-3,6-di[(5-hexyl-2-thienyl)ethynyl]carbazole (1), 9-Hexyl-3,6-di[(5-hexyl-2-thienyl)carbazole (2), 9-Hexyl-3,6-di[(5-vinylpyridyl)-2-thienyl]-carbazole (3) and 9-Hexyl-3,6-di[(5-vinylpyridyl)-2-thienyl]carbazole (4) for the lowest excited state are 537.64, 550.76, 1,352.95 and 1340.40 × 10-50 cm4 s photon-1, resp. Calculated and explt. data have shown that thiophene as π-electron bridge improves the two-photon absorption cross sections greatly. Two-photon optical data recording explts. have been carried out at 820 nm laser radiation.
Hit Structure

CAS Registry Number
1375609-11-4 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-hexyl-3,6-bis(5-phenyl-2-thienyl)- (CA INDEX NAME)



L25 ANSWER 4 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:1050165 CAPLUS Full-text
Document Number
155:374762

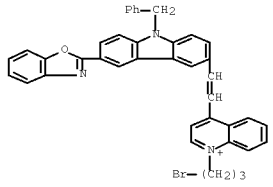
Title
Carbazole bridge-containing fluorescent cyanine dye probe and preparation method thereof
Author(s)/Inventor
Fei, Yuliang; Gu, Yingchun; Li, Chao; Yang, Xu
Patent Assignee/Corporate Source
Tianjin Institute of Urban Construction, Peop. Rep. China
Source
Faming Zhuanli Shenqing, Bpp. CODEN: CNXXEV
Document Type
Patent
Language
Chinese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 102154003	A	20110817	CN 2011-10036888	20110212

Abstract
The title carbazole bridge-containing fluorescent cyanine dyes probe is composed of thiazole orange (TO), oxazole yellow (YO), 4-Me quinoline salt, and carbazole bridge bonded between benzothiazole of TO or YO and 4-Me quinoline salt. The characteristics of the carbazole bridge-containing fluorescent cyanine dyes probe comprises fluorescent emission wavelength of 530-48 nm, fluorescence intensity of 30-55, stocks of 130-151 nm and fluorescence quantum yield of 0.02-0.6. The title method comprises mixing N,N-DMF and phosphorus oxychloride, dropwise adding 1,2-dichloroethane solns. of 3-benzothiazolyl-N-Et carbazole, 3-benzothiazolyl-N-benzyl carbazole, and 3-benzoxazolyl-N-benzyl carbazole, reacting under reflux for 6-12 h, cooling, adding the mixture into ice water, extracting with dichloromethane, purifying column chromatog., reacting to obtain 3-benzothiazolyl-6-formyl-N-Et carbazole, 3-benzoxazolyl-6-formyl-N-Et carbazole, 3-benzothiazolyl-6-formyl-N-benzyl carbazole, and 3-benzoxazolyl-6-formyl-N-benzyl carbazole, adding the products and N-substituent 4-Me quinoline in ethanol, dropwise adding piperidine, reacting under reflux for 8-16 h, cooling to room temperature, adding Et ether, precipitating red solid, vacuum filtering and purifying via column chromatog. The fluorescent cyanine dye probe has broad spectral range, higher molar extinction coefficient and high sensitivity.
Hit Structure

CAS Registry Number
1332477-30-1 CAPLUS

Chemical or Trade Name
Quinolinium, 4-[2-[6-(3-benzoxazolyl)-9-(phenylmethyl)-9H-carbazol-3-yl]ethenyl]-1-(3-bromopropyl)-, bromide (1:1) (CA INDEX NAME)

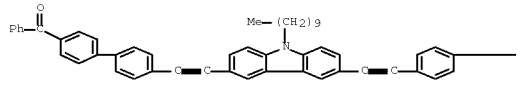


L25 ANSWER 5 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:1008527 CAPLUS Full-text
Document Number
155:300438
Title
Engineering Solid-State Morphologies in Carbazole-Ethynylene Macrocycles
Author(s)/Inventor
Fitte, Aaron D.; Gross, Dustin E.; Han, Amy; Moore, Jeffrey S.
Patent Assignee/Corporate Source
Department of Chemistry, University of Illinois at Urbana-Champaign, Urbana, IL, 61801, USA
Source
Journal of the American Chemical Society (2011), 133(38), 14963-14970 CODEN: JACSAT; ISSN: 0002-7863
Document Type
Journal; (online computer file)
Language
English
Abstract
We present a crystallog. study that systematically investigates the effects of the n-alkyl side-chain length on the crystal packing in shape-persistent macrocycles. The solid-state packing of carbazole-ethynylene-containing macrocycles is sensitive to the alkyl-chain length. In macrocycles containing n-alkyl side chains up to nine carbons in length, face-on aromatic π interactions predominate, while the addition of one carbon leads to a completely different packing arrangement. Macrocycles with C10 or C11 chains exhibit a novel packing motif wherein the alkyl chains interdigitate between macrocycles, leading in one case to continuous solvent-filled channels. When crystals of the C10 macrocycle are bathed in solvent, the included mols. exchange with the external solvent, and the alkyl-chain disorder changes in response to changes in the guest volume in order to retain crystallinity. Powder X-ray diffraction data indicate that alkyl-macrocycle interactions in the longer chains "emulate" the distances typical of face-to-face π interactions, leading to deceptive indicators of π stacking.
Hit Structure

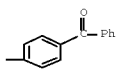
CAS Registry Number
1325810-34-1 CAPLUS

Chemical or Trade Name
Methanone, 1,1'-[(9-decyl-9H-carbazole-3,6-diyl)bis(2,1-ethynediyl)]bis[1-phenyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



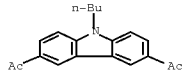
L25 ANSWER 6 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:674621 CAPLUS Full-text
Document Number
154:568284
Title
Novel carbazole-pyridine copolymers by an economical method: synthesis, spectroscopic and thermochemical studies
Author(s)/Inventor
Saeed, Asmer; Irfan, Madiha; Samra, Shahid Ameen
Patent Assignee/Corporate Source
Department of Chemistry, Quaid-i-Azam University, Islamabad, Pak.
Source
Beilstein Journal of Organic Chemistry (2011), 7, 638-647, No. 75 CODEN: BJOCBI; ISSN: 1860-5397 URL: http://www.beilstein-journals.org/bjoc/content/pdf/1860-5397-7-75.pdf
Document Type
Journal; (online computer file)
Language
English
Abstract
The synthesis, as well as spectroscopic and thermochem. studies of a novel class of carbazole-4-phenyl-pyridine co-polymers are described. The synthesis was carried out by a simple and cheaper method compared to the lengthy methods usually adopted for the preparation of carbazole-pyridine copolymers which involve costly catalysts. Thus, two series of polymers were synthesized by a modified Chichibabin reaction, i.e., by the condensation of diacetylated N-alkylcarbazoles with 3-substituted benzaldehydes in the presence of ammonium acetate in refluxing acetic acid. All the polymers were characterized by FTIR, 1H NMR, 13C NMR, UV-vis spectroscopy, fluorometry, TGA and DSC. The weight average mol. masses (Mw) of the polymers were estimated by the laser light scattering (LLS) technique.
Hit Structure

CAS Registry Number
1303901-81-8 CAPLUS

Chemical or Trade Name
INDEX NAME NOT YET ASSIGNED

CM
1

CRN 1483-95-0
CMF C20 H21 N O2

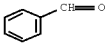


CM
2

CRN 631-61-8
CMF C2 H4 O2 . H3 N

CM
3

CRN 100-52-7
CMF C7 H6 O

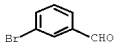


CAS Registry Number
1303901-88-5 CAPLUS

Chemical or Trade Name
INDEX NAME NOT YET ASSIGNED

CM
1

CRN 3132-99-8
CMF C7 H5 Br O



CM
3

CRN 1483-95-0
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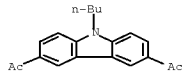


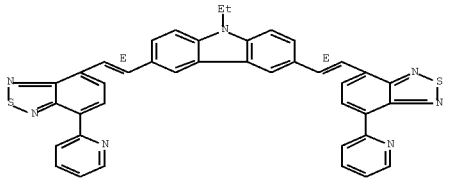
CM
3

CRN 631-61-8
CMF C2 H4 O2 . H3 N

L25 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:598300 CAPLUS Full-text
Document Number
155:50042
Title
Two-photon sensors for proton derived from 7-pyridinylbenzo[d][1,2,3]thiadiazole acceptor
Author(s)
Zhao, Wei-feng; Wang, Xiao-mei; Luo, Jian-ting; Tao, Xu-tang
Patent Assignee/Corporate Source
Institute of Chemistry and Materials Science, Soochow University, Suzhou, 215123, Peop. Rep. China
Source
Guangpuxue Yu Guangpu Fenxi (2011), 31 (5), 1300-1304 CODEN: GYGFED; ISSN: 1000-0593
Document Type
Journal
Language
Chinese
Abstract
Two new chromophores with carbazole as mol. focal point bearing either one o-pyridine-benzothiadiazole unit or two o-pyridine-benzothiadiazole units at the periphery resp., named as 2,8-(5-pyridine-benzothiadiazole)-N-ethyl-carbazole (CPTZ1) and 2,8-bis(5-pyridine-benzothiadiazole)-N-ethyl- carbazole (CPTZ2), were synthesized and characterized by IR spectra, 1H NMR spectra and MS. The influence of proton upon one-photon and two-photon fluorescence about these two compds. was discussed. Stern-Volmer equation gives that the S-V consts. (KSV1P) of one-photon fluorescence (1PF) of CPTZ1 and CPTZ2 are 0.04 and 0.10 L· mol-1, resp., while the KSV2P, of two-photon fluorescence (2PF) of CPTZ1 and CPTZ2 are 0.20 and 0.22 L· mol-1, resp. Obviously, two-photon (2P) fluorescence detection presented more sensitivity than one-photon (1P) fluorescence response, which exhibits the potential application of two-photon sensor in PH detection.
Hit Structure

CAS Registry Number
1335128-15-3 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-ethyl-3,6-bis[(1E)-2-(2-pyridinyl)-2,1,3-benzothiadiazol-4-yl]ethenyl]- (CA INDEX NAME)



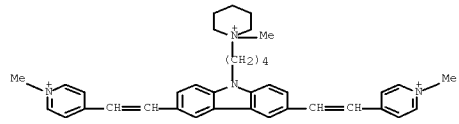
L25 ANSWER 8 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:590342 CAPLUS Full-text
Document Number
154:563133
Title
Fluorescent carbazole compounds for cancer diagnosis
Author(s)
Chang, Ta-Chau; Cho, Chih-Chien; Chang, Cheng-Chung; Kang, Chi-Chih; Wang, Zi-Fu
Patent Assignee/Corporate Source
Academia Sinica, Taiwan
Source
Eur. Pat. Appl., 12pp. CODEN: EPXXDW
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 2319842	A1	20110511	EP 2010-13388	20100210
US 20110111429	A1	20110512	US 2009-613770	20091106

Abstract
Title carbazole compound has general formula I [A, B = heteroaryl, X, Y = CH, N, R1-6 = H, alkyl, alkenyl, alkynyl, cycloalkyl, heterocycloalkyl, aryl, heteroaryl, OH, alkoxy, aryloxy, amino, halogen, etc.; R7 = alkylene, alkenylene, alkynylene, etc.; R8 = heterocycloalkyl, etc.; n = 1-3]. A method for detecting a cancer cell using a compound of formula I is also claimed. Thus, in the presence of sodium hydride, 3,6-dibromo-9H-carbazole was reacted with 1,4-dibromobutane to give 3,6-dibromo-9-(4-bromobutyl)carbazole which was then reacted with piperidine in the presence of NaI; the product of the reaction was purified by column chromatog. and heated with a mixture of palladium(II) acetate and tri-o-tolylphosphine, triethylamine, acetonitrile, and 4-vinylpyridine; the product was then methylated with MeI to give the compound II of this invention.
Hit Structure

CAS Registry Number
1301708-00-3 CAPLUS

Chemical or Trade Name
Pyridinium, 4,4'-[9-[4-(1-methylpiperidinio)butyl]-9H-carbazole-3,6-diyldi-2,1-ethenediyl]bis[1-methyl-, iodide (1:3) (CA INDEX NAME)



●3 I−

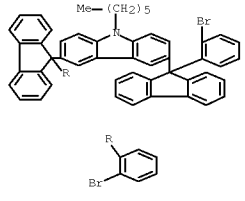
L25 ANSWER 9 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:537462 CAPLUS Full-text
Document Number
154:513127
Title
Process for preparation of fluoradene derivatives
Author(s)
Liu, Cancai; Rong, Lingling
Patent Assignee/Corporate Source
East China Normal University, Peop. Rep. China
Source
Faming Zhuanli Shenqing, 18pp. CODEN: CNXXEV
Document Type
Patent
Language
Chinese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 102030701	A	20110427	CN 2010-10530868	20101104

Abstract
This invention provides a process for the preparation of fluoradene derivs. comprising Friedel crafts alkylation and intramol. aromatization. For example, 2-bromoaniline was reacted with NaNO2/HCl at -5-0 °C for 1-2 h, followed by adding KI, reaction with fluoren-9-one, carbazole, and intramol. aromatization in the presence of Pd(OAc)2, PPh3, and triethylphenylammonium chloride to give I. The title compds. may be used as organic photovoltaic materials.
Hit Structure

CAS Registry Number
1273569-17-1 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis[9-(2-bromophenyl)-9H-fluoren-9-yl]-9-hexyl- (CA INDEX NAME)

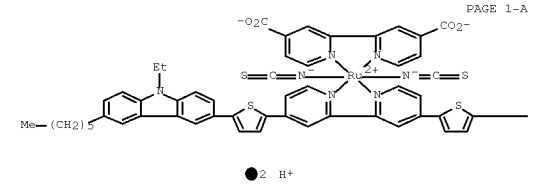


L25 ANSWER 10 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:392914 CAPLUS Full-text
Document Number
154:460635
Title
Improved Efficiency of over 10% in Dye-Sensitized Solar Cells with a Ruthenium Complex and an Organic Dye Heterogeneously Positioning on a Single TiO2 Electrode
Author(s)
Fan, Sheng-Qiang; Kim, Chulseo; Fang, Baiseng; Liao, Kai-Ximg; Yang, Guan-Jun; Li, Chang-Ju; Kim, Jeum-Jong; Ko, Jaejung
Patent Assignee/Corporate Source
Department of Advanced Materials Chemistry, Korea University, Chungnam, 339-700, S. Korea
Source
Journal of Physical Chemistry C (2011), 115(15), 7747-7754 CODEN: JPCCCK; ISSN: 1932-7447
Document Type
Journal; (online computer file)
Language
English
Abstract
A Ru complex (JK-142) with an ancillary bipyridyl ligand substituted by a 3-carbazole-2-thiophenyl moiety was synthesized and explored as a sensitizer in cosensitized solar cells in combination with an organic dye (JK-42). The extended π-conjugation in the ancillary ligand enables the JK-142 dye to have a red shift light absorption band; however, the ineffective penetration of JK-142 mols. into the inner surface of TiO2 film results in low photovoltaic performance for the single dye sensitized solar cell due to its large mol. size of JK-142. When the deficient JK-142 electrode was employed to assemble a cosensitized solar cell by addnl. adsorbing JK-42 dye, a considerably improved efficiency of up to 10.2% was achieved, which is favorably superior to that (approx.8.68%) of N719 in the same device configuration. The results shown here not only provide new vision on how to produce highly efficient solar cells using dyes with extended mol. structure but also open up a new way to position different dyes on a single TiO2 film for cosensitization through controlling the mol. size.
Hit Structure

CAS Registry Number
1390545-70-4 CAPLUS

Chemical or Trade Name
Ruthenate(3-), [[2,2'-bipyridine]-4,4'-dicarboxylato(2-)-κN1,κN1'][2,2'-[[2,2'-bipyridine]-4,4'-diyl-κN1,κN1']bis(5,2-thiophenediyl)]bis[9-ethyl-6-hexyl-9H-carbazole]]bis(thiocyanato-κN)-, hydrogen (1:3), (OC-6-33)- (CA INDEX NAME)

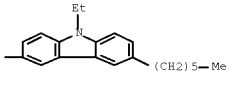
●3 I−



PAGE 1-A

●2 H+

PAGE 1-B



CO.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L25 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:320413 CAPLUS Full-text
Document Number
154:385784
Title
Photopolymerization initiator and photosensitive composition
Author(s)
Nomo, Takashi; Yamada, Hiroki
Patent Assignee/Corporate Source
Nippon Steel Chemical Co., Ltd., Japan
Source
Repub. Korean Kongkae Taeho Kongbo, 12pp. CODEN: KRXKA7
Document Type
Patent
Language
Korean
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 20110027566	A	20110316	KR 2010-81296	20100823
JP 2011068036	A	20110421	JP 2010-181505	20100816
CN 102010475	A	20110413	CN 2010-10274752	20100806

Abstract
The title photopolymn. initiator is shown as chemical formula R2CO2N=CAR1 (R1 = aryl with more than one nitro group; R2 is substituted/unsubstituted C1-20 saturated or unsatd. monovalent organic group, can form a branch structure or ring structure, or can contain heteroatom at any position; Ar = substituent with carbazole skeleton with nitro group), and has high sensitivity and thermal stability.
Hit Structure

CAS Registry Number
1376540-32-9 CAPLUS

Chemical or Trade Name
Methanone, (9-ethyl-6-nitro-9H-carbazol-3-yl)(3-nitrophenyl)-, O-acetyloxime (CA INDEX NAME)

L25 ANSWER 12 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN

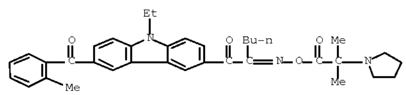
Accession Number
2011:327670 CAPLUS Full-text
Document Number
154:373285
Title
Photopolymerizable composition, color filter, method for producing same, solid-state image pickup element, liquid crystal display device, lithographic printing original plate, and novel compound
Author/Inventor
Makino, Masaomi
Patent Assignee/Corporate Source
Fujifilm Corporation, Japan
Source
PCT Int. Appl., 134pp. CODEN: PIXXD2
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2011030645	A1	20110317	WO 2010-JP63585	20100810
JP 2011081349	A	20110421	JP 2010-173125	20100730

Abstract
Disclosed is a photopolymerizable composition which contains (A) a photopolymn. initiator that has a partial structure represented by general formula C=N-OOC-Cr3R4X (R3,4 = H, alkyl, alkenyl, alkynyl, etc.; R3 and R4 may form ring with each other; and X = substituent) and (B) a polymerizable compound. The photopolymerizable composition is capable of forming a cured film that has high sensitivity, excellent curability with respect to the inner part of the film, and excellent adhesion to a supporting body. The cured film is able to maintain a patterned shape even during post-heating after development and has good pattern formability, while being suppressed in coloring due to heating or passage of time.
Hit Structure

CAS Registry Number
1272666-11-1 CAPLUS

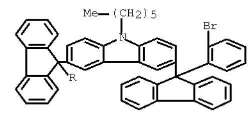
Chemical or Trade Name
1,2-Hexanedione, 1-[9-ethyl-6-(2-methylbenzoyl)-9H-carbazol-3-yl]-, 2-[O-[2-methyl-1-oxo-2-(1-pyrrolidinyl)propyl]oxime] (CA INDEX NAME)

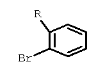


L25 ANSWER 13 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:132384 CAPLUS Full-text
Document Number
154:360791
Title
Fluoradenes via palladium-catalyzed intramolecular arylation
Author/Inventor
Rong, Lingling; Liu, Qiancai; Shi, Yingbo; Tang, Jie
Patent Assignee/Corporate Source
Department of Chemistry, East China Normal University, Shanghai, 200062, Peop. Rep. China
Source
Chemical Communications (Cambridge, United Kingdom) (2011), 47(7), 2155-2157 CODEN: CHCOFS; ISSN: 1359-7345
Document Type
Journal
Language
English
Abstract
A novel approach towards 7b-aryl-indeno[1,2,3-jk]fluorene based on a nitrogen-containing core is reported. The acid-promoted Friedel-Crafts reaction of 9-(2-bromophenyl)-9-fluorenol with carbazole, triphenylamine or triindole afforded 9-(2-bromophenyl)fluorenyl-carbazole, -triphenylamine and -triindole derivs., which were subsequently converted to 7b-aryl-fluoradenes, e.g. I, via palladium-catalyzed intramol. C-H direct arylation as a key step.
Hit Structure

CAS Registry Number
1273569-17-7 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis[9-(2-bromophenyl)-9H-fluoren-9-yl]-9-hexyl- (CA INDEX NAME)





L25 ANSWER 14 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:62756 CAPLUS Full-text
Document Number
154:207426
Title
Multifunctional carbazole oxime ester derivative, its preparation method and application as photopolymerization initiator
Author/Inventor
Wang, Zhigang; Wang, Yanchao; Wang, Yapeng; Zhang, Yongbo; Zhao, Xinyang; Zhang, Yanfeng; Xu, Chuchen; Song, Huaihai
Patent Assignee/Corporate Source
Shenzhen Youwei Chemical Technology Co., Ltd., Peop. Rep. China
Source
Faming Zhuanli Shenqing, 23pp. CODEN: CNXXEV
Document Type
Patent
Language
Chinese
Patent Information

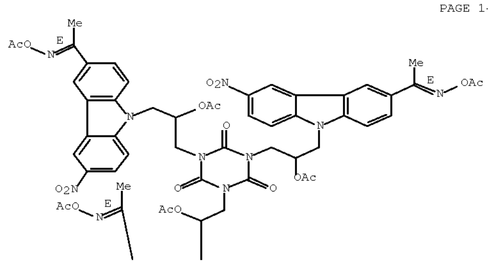
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101941939	A	20110112	CN 2010-10233220	20100721

Abstract
The invention disclosed a kind of multifunction carbazole oxime ester derivative, its preparation method and application as photopolymn. initiator. The claimed multifunction carbazole derivational oxime ester is shown in structure I (n = 2-6; X = NO2, F, Cl, Br, I, or PPh2, O=PPh2, SPh, SOPh or SO2Ph; R1 and R2 = H, CN, CF3, CF2R3, CFR3R4, C1-C24 branched or linear alkyl with or without ring, the alkyl can be interrupted by less than 8 N, S or O atoms; substituted C6-C36 aryl; Q = n-valence joint group and can be derived from poly haloalkyl, poly alc., poly epoxide, poly carboxylic acid derivative). The claimed compound is prepared via functionalization of carbazole mother nucleus, acylation, coupling, oximation, and esterification etc. multiple steps (procedure given). The obtained carbazole derivative can be used as photopolymn. initiator.
Hit Structure

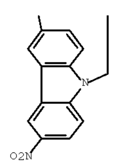
CAS Registry Number
1263189-56-5 CAPLUS

Chemical or Trade Name
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[2-(acetyloxy)-3-[3-[(1E)-1-[(acetyloxy)imino]ethyl]-6-nitro-9H-carbazol-9-yl]propyl]- (CA INDEX NAME)

PAGE 1-A



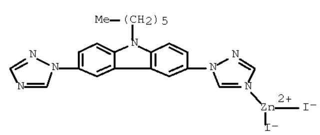
PAGE 2-A



L25 ANSWER 15 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:36511 CAPLUS Full-text
Document Number
154:325592
Title
Cation-induced assembly of Zn(II), Cd(II) and Hg(II) coordination complexes and DFT calculations to evaluate weak interactions between the helical chains
Author/Inventor
Geng, Wen Qian; Li, Xian Lei; Yin, Jian Hui; Ke, Wei Zai; Hao, Fu Yin; Xu, Guo Yi; Zhou, Hong Ping; Wu, Jie Ying; Tian, Yu Peng
Patent Assignee/Corporate Source
Department of Chemistry, Anhui University, Hefei, 230039, Peop. Rep. China
Source
Science China: Chemistry (2011), 54(1), 173-179 CODEN: SCCCCS; ISSN: 1869-1870
Document Type
Journal; (online computer file)
Language
English
Abstract
Two new coordination polymers [ZnLI2]∞ (1) and [CdLI2]∞ (2) (L: 3,6-di-(1,2,4-triazol-1-yl)-N-hexylcarbazole) were synthesized and their crystal structures were determined by single-crystal x-ray diffraction techniques. Crystal data of 1: monoclinic, P21/c, a = 10.777(5), b = 13.465(5), c = 17.012(5) Å, β = 90.544(5)°, Z = 4, 3244 unique reflections, 295 refined parameters, R1 = 0.0519, wR2 = 0.0952; of 2: monoclinic, P21/c, a = 10.263(5), b = 21.919(5), c = 15.640(5) Å, β = 130.014(19)°, Z = 4, 4736 unique reflections, 291 refined parameters, R1 = 0.0745, wR2 = 0.2037. Complexes are both constructed with the helical chains along the 21 screw axis. The coordination bond, C-H...I weak interactions and π-π interactions play significant roles in constructing their 3D or 2D frameworks. Two different DFT calcns. are performed for the weak interactions between the helical chains of the 3 different coordination polymers ([ZnLI2]∞, [CdLI2]∞ and the reported [HgLI2]∞). The results reveal that weak interactions play important roles in these supramol. systems of helical configuration, namely, the trend is the shorter H...I distance and π-π stacking distance, the stronger the intermol. interactions. The photoluminescence of the complexes measured in the solid state at room temperature indicates that the emission intensity varies extensively, which can be rationalized by the heavy atom effect.
Hit Structure

CAS Registry Number
1268601-53-1 CAPLUS

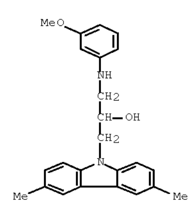
Chemical or Trade Name
INDEX NAME NOT YET ASSIGNED



L25 ANSWER 16 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:22527 CAPLUS Full-text
Document Number
154:173404
Title
Development of Proneurogenic, Neuroprotective Small Molecules
Author/Inventor
MacMillan, Karen S.; Naidoo, Jacinth; Liang, Jue; Melito, Lisa; Williams, Noelle S.; Morlock, Lorraine; Huntington, Paula J.; Estill, Sandi Jo; Longgood, Jamie; Becker, Ginger L.; McKnight, Steven L.; Pieper, Andrew A.; De Brabander, Jef K.; Ready, Joseph M.
Patent Assignee/Corporate Source
Department of Biochemistry, University of Texas Southwestern Medical Center, Dallas, TX, 75390-9038, USA
Source
Journal of the American Chemical Society (2011), 133(5), 1428-1437 CODEN: JACSAT; ISSN: 0002-7863
Document Type
Journal; (online computer file)
Language
English
Abstract
Degeneration of the hippocampus is associated with Alzheimer's disease and occurs very early in the progression of the disease. Current options for treating the cognitive symptoms associated with Alzheimer's are inadequate, giving urgency to the search for novel therapeutic strategies. Pharmacol. agents that safely enhance hippocampal neurogenesis may provide new therapeutic approaches. We discovered the first synthetic mol., named P7C3, which protects newborn neurons from apopotic cell death, and thus promotes neurogenesis in mice and rats in the subgranular zone of the hippocampal dentate gyrus, the site of normal neurogenesis in adult mammals. We describe the results of a medicinal chemical campaign to optimize the potency, toxicity profile, and stability of P7C3. Systematic variation of nearly every position of the lead compound revealed elements conducive toward increases in activity and regions subject to modification. We have discovered compds. that are orally available, nontoxic, stable in mice, rats, and cell culture, and capable of penetrating the blood-brain barrier. The most potent compds. are active at nanomolar concns. Finally, we have identified derivs. that may facilitate mode-of-action studies through affinity chromatog. or photo-crosslinking.
Hit Structure

CAS Registry Number
1235481-53-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-9-ethanol, α-[[(3-methoxyphenyl)amino]methyl]-3,6-dimethyl- (CA INDEX NAME)



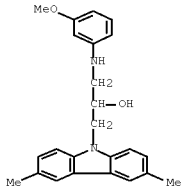
L25 ANSWER 17 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2011:20010 CAPLUS Full-text
Document Number
154:109420
Title
Preparation of carbazolylaminopropanols and related compounds as pro-neurogenic compounds.
Author(s)/Inventor
McKnight, Steven L.; Pieper, Andrew A.; Ready, Joseph M.; De Brabander, Jef K.
Patent Assignee/Corporate Source
The University of Texas System, USA
Source
U.S. Pat. Appl. Publ., 152 pp., Cont.-in-part of U.S. Ser. No. 685682. CODEN: USXXCO
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20110009496	A1	20110106	US 2010-852056	20100707
US 20110015217	A1	20110120	US 2010-685652	20100111

Abstract
Title compds. [I; R1-R4 = H, halo, OH, SH, alkoxy, alkylthio, haloalkoxy, haloalkylthio, alkyl, haloalkyl, cyano, amino, NO2, alkylcarbonylamino; R, R' = H, alkyl, haloalkyl; or R,R' = atoms to form fused (substituted) Ph, cycloalkyl, heterocyclyl, heteroaryl; L1, L2 = bond, (substituted) alkylene; A = CO, (substituted) cycloalkylene, cycloheterocycloalkylene, methylene; Z = NR10R11, CONR10R11, OR12, SO2R13, (substituted) heterocycloalkenyl, aryl, heteroaryl, etc.; n = 0-2; R10, R11 = H, (substituted) aryl, heteroaryl, alkyl, alkenyl, alkynyl, etc.; R12 = (substituted) aryl, heteroaryl, alkyl, arylsulfonyl, etc.; R13 = (substituted) aryl, heteroaryl, arylcycloalkyl, arylheterocycl, etc.], were prepared. Thus, 3,6-dibromocarbazole, epibromohydrin, and KOH were stirred together overnight to give 88% 3,6-dibromo-9-(oxiran-2-ylmethyl)-9H-carbazole. This was refluxed overnight with m-anisidine and BiCl3 in cyclohexane to give 25% 1-(3,6-dibromo-9H-carbazol-9-yl)-3-(3-methoxyphenylamino)propan-2-ol. Resolution of this using (S)-Mosher's acid chloride afforded the (+)-enantiomer, which exhibited high activity, and the (-)-enantiomer, which exhibited low activity in an in vivo screen for dose-responsive neurotrophic efficacy.
Hit Structure

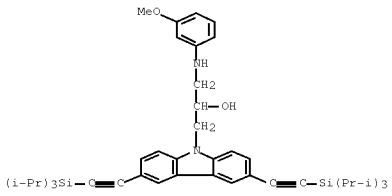
CAS Registry Number
1375401-53-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-9-ethanol, α-[[(3-methoxyphenyl)amino]methyl]-3,6-dimethyl- (CA INDEX NAME)



CAS Registry Number
1266178-45-9 CAPLUS

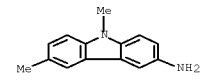
Chemical or Trade Name
9H-Carbazole-9-ethanol, α-[[(3-methoxyphenyl)amino]methyl]-3,6-bis[2-[tris(1-methylethyl)silyl]ethynyl]- (CA INDEX NAME)



L25 ANSWER 18 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:571321 CAPLUS Full-text
Document Number
154:162508
Title
Copper-catalyzed aerobic oxidative coupling of aminocarbazoles and aminoindoles: synthesis of diindolophenazines and dipyrrolophenazines.
Author(s)/Inventor
Meesala, Ramu; Nagarajan, Rajagopal
Patent Assignee/Corporate Source
School of Chemistry, University of Hyderabad, Hyderabad, 500046, India
Source
Synlett (2010), (16), 2509-2512 CODEN: SYNLES; ISSN: 0936-5214
Document Type
Journal
Language
English
Abstract
We have developed a simple method for the synthesis of diindolophenazine and dipyrrolophenazine derivs. by the aerobic oxidative coupling of 3-aminocarbazole and 2,3-dimethyl-5-aminoindole derivs., resp., in the presence of catalytic CuBr (10 mol%) in DMSO at 80 °C while open to air.
Hit Structure

CAS Registry Number
1262653-30-4 CAPLUS

Chemical or Trade Name
9H-Carbazol-3-amine, 6,9-dimethyl- (CA INDEX NAME)



L25 ANSWER 19 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:1465866 CAPLUS Full-text
Document Number
154:11463
Title
Application of carbazole oxime ester compound as photoinitiator for photopolymerizable acrylate compositions.
Author(s)/Inventor
Qian, Xiaochun; Hu, Chunqing; Wang, Bing
Patent Assignee/Corporate Source
Changzhou Tronly New Electronic Materials Co., Ltd., Peop. Rep. China
Source
Faming Zhuanli Shenqing, 13pp. CODEN: CNXXEV
Document Type
Patent
Language
Chinese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101659645	A	20101124	CN 2010-10227320	20100715

Abstract
The invention relates to the application of carbazole oxime ester compound to photopolymerizable acrylate composition as photoinitiator, the photopolymerizable acrylate composition containing the carbazole oxime ester compound and the application of the photopolymerizable acrylate composition. The carbazole oxime ester compds. [I], wherein R = (II), n = 2, and m = 3 or 4, can be used as photoinitiator in the photopolymerizable acrylate compns., which comprises alkali-soluble resin (the copolymer of benzyl methacrylate, methacrylic acid, hydroxyethyl methacrylate and/or Me methacrylate, wherein the molar ratio of benzyl methacrylate, methacrylic acid, hydroxyethyl methacrylate and/or Me methacrylate is 55:10.5-10.10-30 and the weight-average-mol.-weight of the copolymer is 5000-25000) 20-45, dipentaerythritol hexaacrylate 10-20 and carbazole oxime ester compound (having structural formula (I)) 5-7 weight parts. The photopolymerizable acrylate composition shows excellent suitability, has very good storage stability, very high light sensitivity at short wave, excellent solubility, high curing rate, and less pollution, saves energy, and has high exposure efficiency and small exposure dose, the cured and molded picture and pattern is fine and complete, have no defect or scum, and the film hardness is very good.
Hit Structure

CAS Registry Number
1223775-90-7 CAPLUS

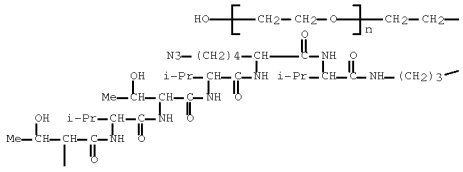
Chemical or Trade Name
1-Propanone, 3-cyclopentyl-1-[9-ethyl-6-(2-methylbenzoyl)-9H-carbazol-3-yl]-, 1-(O-acetyloxime) (CA INDEX NAME)

L25 ANSWER 20 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:1458502 CAPLUS Full-text
Document Number
154:159758
Title
A modular approach towards functional decoration of peptide-polymer nanotapes.
Author(s)/Inventor
Vesch, Andreas; Hahn, Harald; Krause, Eberhard; Coelfen, Helmut; Boerner, Hans G.
Patent Assignee/Corporate Source
Max Planck Institute of Colloids and Interfaces, Potsdam, D-14476, Germany
Source
Chemical Communications (Cambridge, United Kingdom) (2010), 46(47), 8938-8940 CODEN: CHCOFS; ISSN: 1359-7345
Document Type
Journal
Language
English
Abstract
Self-assembled peptide-polymer nanotapes of poly(ethylene oxide)-peptide conjugates are modified by a simple amine-azide transfer to create azide-containing nanofibers, which provide a platform for modular functionalization as demonstrated by the introduction of different carboxyl bearing entities to modulate the calcium binding properties of the nanotapes.
Hit Structure

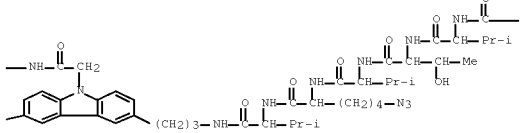
CAS Registry Number
1263930-39-5 CAPLUS

Chemical or Trade Name
Poly(oxy-1,2-ethanediyl), α-hydro-ω-hydroxy-, 7-ether with 7,7'-[19-[8-[12-hydroxyethyl]amino]-2-oxoethyl-9H-carbazole-3,6-diyl]dl-3,1-propanediyl]bis[N,N-dimethylglycyl-L-threonyl-L-valyl-L-threonyl-L-valyl-4-azido-L-norleucyl-L-valinamide] (CA INDEX NAME)

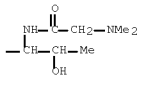
PAGE 1-A



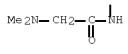
PAGE 1-B



PAGE 1-C



PAGE 2-A

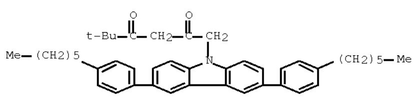


GO.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L25 ANSWER 21 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:1350072 CAPLUS Full-text
Document Number
154:46152
Title
Structure-property relationship of red- and green-emitting iridium(III) complexes with respect to their temperature and oxygen sensitivity
Author/Inventor
Tian, Nan; Lenkeit, Daniel; Pelz, Simon; Fischer, Lorenz H.; Escudero, Daniel; Schiewek, Ralf; Klink, Dennis; Schmitz, Oliver J.; Gonzalez, Leticia; Schaeferling, Michael; Holder, Elisabeth
Patent Assignee/Corporate Source
Functional Polymers Group and Institute of Polymer Technology, University of Wuppertal, Wuppertal, 42097, Germany
Source
European Journal of Inorganic Chemistry (2010), (30), 4875-4885 CODEN: EJICFO; ISSN: 1434-1948
Document Type
Journal
Language
English
Abstract
Relationship of emission wavelengths, oxidation potentials and thermal stability was explored for iridium 2-arylpyridine and 1-phenylisoquinoline β-diketonate cyclometalated complexes. Iridium(III) complexes of the types [Ir(LCN)2(tBuCOCHCOR)] [HLCN = 1-phenylisoquinoline, 2-(1-naphthyl)pyridine, 2-phenylpyridine; R = tBu, 9-carbazolylmethyl, 3,6-bis(4-hexylphenyl)carbazol-9-ylmethyl] were prepared by a known procedure, comprising cyclometalation of the proligands HLCN and dimer cleavage with the corresponding β-diketones, to gradually increase the unsym. architecture of the heteroleptic iridium(III) complexes. Relevant photophys. properties of the known homoleptic Ir(III) cyclometalated complexes [IrL3] [HL = 2-(2-benzothienyl)pyridine, 2-(2,4-difluorophenyl)pyridine, 2-phenylpyridine] were also determined and correlated to the oxidation potentials and thermal stability of the complexes. The photophys. and electrochem. properties of the heteroleptic and homoleptic complexes have been investigated exptl. as well as theor. by using d. functional theory (TD DFT) calcns. The properties of these new neutral heteroleptic iridium(III) complexes have been exptl. compared to homoleptic IrIII complex structures that reveal sym. architectures due to three similar cyclometalating ligands. The emission intensity of the herein described two classes of IrIII complexes is clearly influenced by applying changes to temperature and air pressure. The emphasis is on general design rules for oxygen-sensitive IrIII emitters due to the correlation of the structure-dependent oxygen sensitivity to their phosphorescence lifetimes.
Hit Structure

CAS Registry Number
1253184-55-2 CAPLUS

Chemical or Trade Name
2,4-Hexanedione, 1-[3,6-bis(4-hexylphenyl)-9H-carbazol-9-yl]-5,5-dimethyl- (CA INDEX NAME)

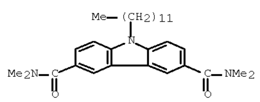


OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L25 ANSWER 22 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:1327061 CAPLUS Full-text
Document Number
155:367191
Title
A New Nonlinear Optically Active Donor-Acceptor-Type Conjugated Polymer: Synthesis and Electrochemical and Optical Characterization
Author/Inventor
Manjunatha, M. G.; Adhikari, A. V.; Hegde, P. K.; Suchand Sandeep, C. S.; Philip, Reji
Patent Assignee/Corporate Source
Organic Chemistry Division, Department of Chemistry, National Institute of Technology Karnataka, Surathkal, Mangalore, 575025, India
Source
Journal of Electronic Materials (2010), 39(12), 2711-2719 CODEN: JECMA5; ISSN: 0361-5235
Document Type
Journal
Language
English
Abstract
A new donor-acceptor-type poly[3-{5-[3,4-didodecyloxy-5-(1,3,4-oxadiazol-2- yl)thiophen-2-yl]-1,3,4-oxadiazol-2-yl}-9-dodecyl-9H-carbazole] (P) has been synthesized through multistep reactions. The new polymer P exhibited good thermal stability and film-forming behavior. The electrochem. band gap is estimated to be 2.15 eV. The polymer emits intense green fluorescence in the solid state. Third-order nonlinear optical (NLO) studies showed that the strong absorptive nonlinearity observed for the polymer is of the optical limiting type, which is due to an "effective" three-photon absorption (3PA) process. This 3PA process can have potential applications in photonic devices. The studies revealed that the new polymer P is a promising material for development of efficient optoelectronic devices.
Hit Structure

CAS Registry Number
1331965-15-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxamide, 9-dodecyl-N3,N3,N6,N6-tetramethyl- (CA INDEX NAME)



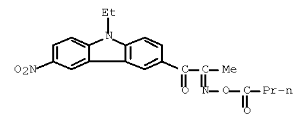
L25 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:1221840 CAPLUS Full-text
Document Number
153:457138
Title
Radical polymerization initiators containing oxime ester compounds with good sensitivity for negative photoresist compositions with good lithographic properties
Author/Inventor
Wada, Munehiro; Kanno, Masaki; Iwata, Kan
Patent Assignee/Corporate Source
Toyo Ink Mfg. Co., Ltd., Japan
Source
Jpn. Kokai Tokkyo Koho, 75pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2010215575	A	20100930	JP 2009-65350	20090318

Abstract
The present invention relates to oxime ester compds. I, wherein R1, R2, R3 = (un)substituted alkenyl alkyl, alkyloxy, aryl, aryloxy, heterocyclic, etc.; R4-10 = H, halogen, nitro, cyano, haloalkyl, (un)substituted alkyl, etc. (≥1 of R4-10 = halogen, nitro, cyano, haloalkyl, (un)substituted alkylsulfinyl, arylsulfinyl, alkylsulfonyl, or arylsulfonyl).
Hit Structure

CAS Registry Number
1246185-43-2 CAPLUS

Chemical or Trade Name
1,2-Propanedione, 1-(9-ethyl-6-nitro-9H-carbazol-3-yl)-, 2-[O-(1-oxobutyl)oxime] (CA INDEX NAME)



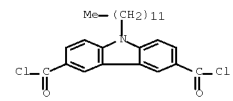
L25 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:1160582 CAPLUS Full-text
Document Number
153:506226
Title
Optical and electrochemical properties of a new donor-acceptor type conjugated polymer derived from thiophene, carbazole and 1,3,4-oxadiazole units
Author/Inventor
Manjunatha, M. G.; Adhikari, Airody Vasudeva; Hegde, Pramod Kumar
Patent Assignee/Corporate Source
Organic Chemistry Division, Department of Chemistry, National Institute of Technology Karnataka, Mangalore, 575025, India
Source
Materials Science Forum (2010), 657(Current Application of Polymers and Nano Materials), 46-55 CODEN: MSFOEP; ISSN: 0255-5476
Document Type
Journal
Language
English
Abstract
A new donor-acceptor type poly[3-{5-[3,4-didecyloxy-5-(1,3,4-oxadiazol-2- yl)thiophen-2-yl]-1,3,4-oxadiazol-2-yl}-9-dodecyl-9H-carbazole] (P) has been synthesized starting from thiodiglycolic acid and 9H-carbazole through multistep reactions. The polymer has been synthesized through precursor polyhydrazide route. The weight average mol. weight of the polymer was found to be 7210. The polymer exhibited intense green fluorescence in solid sate. Cyclic voltammetric expts. showed that the polymer has low-lying LUMO (-3.55 eV) and high lying HOMO (-5.77 eV) energy levels due to the presence of alternate donor and acceptor units. The optical and electrochem. studies reveal that the new polymer (P) is a promising material for the development of polymer light emitting diodes (PLEDs).
Hit Structure

CAS Registry Number
1249902-63-3 CAPLUS

Chemical or Trade Name
INDEX NAME NOT YET ASSIGNED

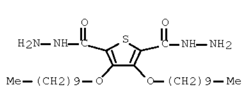
CM 1

CRN 1249902-62-2
CMF C26 H31 Cl2 N O2



CM 2

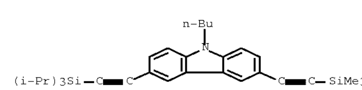
CRN 918822-37-4
CMF C26 H48 N4 O4 S



L25 ANSWER 25 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:1132946 CAPLUS Full-text
Document Number
153:505866
Title
Synthesis of Fluorescent Dye-Tagged Nanomachines for Single-Molecule Fluorescence Spectroscopy
Author/Inventor
Vives, Guillaume; Guerrero, Jason M.; Godoy, Jazmin; Khatua, Saumyakanti; Wang, Yu-Pu; Kiappes, J. L.; Link, Stephan; Tour, James M.
Patent Assignee/Corporate Source
Department of Chemistry, Department of Mechanical Engineering and Materials Science, The Smalley Institute for Nanoscale Science and Technology, Rice University, Houston, TX, 77005, USA
Source
Journal of Organic Chemistry (2010), 75(19), 6631-6643 CODEN: JOCEAH; ISSN: 0022-3263
Document Type
Journal
Language
English
Abstract
In an effort to elucidate the mechanism of movement of nanovehicles on nonconducting surfaces, the synthesis and optical properties of five fluorescently tagged nanocars are reported. The nanocars were specifically designed for studies by single-mol. fluorescence spectroscopy and bear a tetramethylrhodamine isothiocyanate fluorescent tag for excitation at 532 nm. The mols. were designed such that the arrangement of their mol. axles and p-carborane wheels relative to the chassis would be conducive to the control of directionality in the motion of these nanovehicles.
Hit Structure

CAS Registry Number
1247953-63-4 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-butyl-3-[2-(trimethylsilyl)ethynyl]-6-[2-[tris(1-methylethyl)silyl]ethynyl]- (CA INDEX NAME)

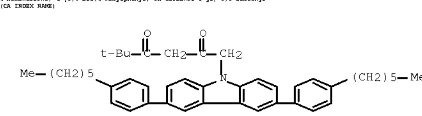


OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L25 ANSWER 26 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:1119906 CAPLUS Full-text
Document Number
153:555324
Title
Cyclometalated red iridium(iii) complexes containing carbazolyl-acetylacetonate ligands: efficiency enhancement in polymer LED devices
Author/Inventor
Tian, Nan; Aulin, Yaroslav V.; Lenkeit, Daniel; Pelz, Simon; Mikhnenko, Oleksandr V.; Blom, Paul W. M.; Loi, Maria Antonietta; Holder, Elisabeth
Patent Assignee/Corporate Source
Functional Polymers Group and Institute of Polymer Technology, University of Wuppertal, Wuppertal, D-42097, Germany
Source
Dalton Transactions (2010), 39(37), 8613-8615 CODEN: DTARAF; ISSN: 1477-9226
Document Type
Journal
Language
English
Abstract
The design, synthesis, photophys. and significantly improved electrooptical properties of a series of red emitting cyclometalated iridium(iii) complexes containing carbazolyl-acetylacetonate ligands are described.
Hit Structure

CAS Registry Number
1253184-55-2 CAPLUS

Chemical or Trade Name
2,4-Hexanedione, 1-[3,6-bis(4-hexylphenyl)-9H-carbazol-9-yl]-5,5-dimethyl- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L25 ANSWER 27 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:1096303 CAPLUS Full-text
Document Number
153:370847
Title
Oxime esters having carbazole structures, photopolymerization initiators containing them, and photosensitive resin compositions containing them
Author/Inventor
Taguchi, Hiroshi
Patent Assignee/Corporate Source
Nippon Chemical Works Co., Ltd., Japan

Source
Jpn. Kokai Tokkyo Koho, 18pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2010149230	A	20100902	JP 2009-32112	20090216

Abstract
The title crime esters are represented by I [R1 = H, C1-17 alkyl, C1-8 alkoxy, (substituted) Ph, (substituted) naphthyl; R2, R3 = H, C1-17 alkyl, C1-8 alkoxy, halo, (substituted) Ph, (substituted) naphthyl, anthryl, pyridyl, benzofuryl, benzothienyl; Ar = bond, C1-10 alkylene, vinylene, phenylene, biphenylene, pyridylene, naphthylene, anthrylene, thienylene, 2,5-pyrrole-diyl, 4,4'-stilbene-diyl, 4,2'-styrene-diyl; n = 0, 1; when n = 0 and Ar = bond, phenylene, naphthylene, thienylene, R1, R2 = Me, Et, and R3 = Me, Ph]. The title compds., e.g., photoresists, containing ethylenically unsatd. compds. and I, show high UV sensitivity.
Hit Structure

CAS Registry Number
1041609-75-7 CAPLUS

Chemical or Trade Name
1,3-Propanedione, 1,1'-[2,5-thiophenediylbis[carbonyl(9-ethyl-9H-carbazole-6,3-diyl)]]bis-, 2,2'-bis(O-acetyloxime) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

—OAc

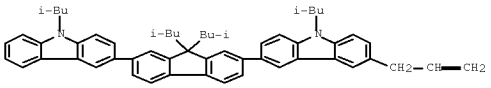
L25 ANSWER 28 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:913365 CAPLUS Full text
Document Number
153:203147
Title
Hybrid host materials for electrophosphorescent devices
Author(s)
Chen, Shaw H.; Zeng, Lichang; Lee, Thomas Yung-Hsin
Patent Assignee/Corporate Source
The University of Rochester, USA
Source
U.S. Pat. Appl. Publ., 64pp. CODEN: USXXCO
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20100164942	A1	20100722	US 2010-692462	20100122
WO 2010085676	A1	20100729	WO 2010-US21847	20100122

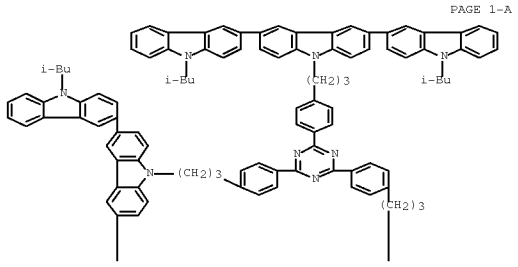
Abstract
Compds. (including polymers) for use in hybrid host materials which can be used in electroluminescent devices are disclosed. The compds. comprise at least one electron-transporting moiety and at least one hole-transporting moiety which are joined by a flexible linker. Hybrid host materials comprising the compds. exhibit stability against phase separation, elevated glass transition temperature, morphol. stability against crystallization, and isolation of the electron transporting moiety and hole transporting moiety π-systems.
Hit Structure

CAS Registry Number
1234629-56-1 CAPLUS

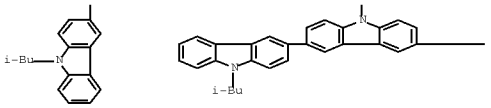
Chemical or Trade Name
9H-Carbazole, 3-[9,9-bis(3-methylpropyl)-7-[9-(3-methylpropyl)-9H-carbazol-3-yl]-9H-fluoren-2-yl]-9-(3-methylpropyl)-6-(2-propen-1-yl)- (CA INDEX NAME)



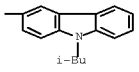
PAGE 1-A



PAGE 2-A



PAGE 2-B



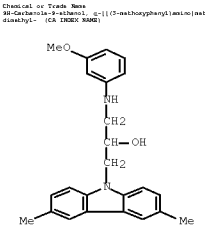
L25 ANSWER 29 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:877340 CAPLUS Full text
Document Number
153:204190
Title
Preparation of carbazolylaminopropanols and related compounds as pro-neurogenic compounds.
Author(s)
McKnight, Steven L.; Pieper, Andrew A.; Ready, Joseph M.; De Brabander, Jef
Patent Assignee/Corporate Source
University of Texas Southwestern Medical Center, USA
Source
PCT Int. Appl., 222pp. CODEN: PIXD2
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2010085115	A1	20100715	WO 2010-US20681	20100111
CA 2746813	A1	20100715	CA 2010-2746813	20100111

Abstract
Title compds. [I; R1-R4 = H, halo, OH, SH, alkoxy, alkylthio, haloalkoxy, haloalkylthio, alkyl, haloalkyl, cyano, amino, NO2, alkylcarbonylamino; R, R' = H, alkyl, haloalkyl; R1R2 = atoms to form fused (substituted) Ph, cycloalkyl, heterocyclyl, heteroaryl; L1, L2 = bond, (substituted) alkylene, A = CO, (substituted) cycocycloalkylene, oxoheterocycloalkylene, methylene; Z = NR10R11, CONR10R11, OR12, SO2R13, (substituted) heterocycloalkanyl, aryl, heteroaryl, etc.; n = 0-2; R10, R11 = H, (substituted) aryl, heteroaryl, alkyl, alkanyl, alkynyl, etc.; R12 = (substituted) aryl, heteroaryl, alkyl, arylcycloalkyl, etc.; R13 = (substituted) aryl, heteroaryl, arylcycloalkyl, arylheterocyclyl, etc.], were prepared. Thus, 3,6-dibromocarbazole, epibromohydrin, and KOH were stirred together overnight to give 88% 3,6-dibromo-9-(oxiran-2-ylmethyl)-9H-carbazole. This was refluxed overnight with m-anisidine and EtOH in cyclohexane to give 25% 1-(3,6-dibromo-9H-carbazol-9-yl)-3-(3-methoxyphenylamino)propan-2-ol. Resolution of this using (S)-Mosher's acid chloride afforded the (+)-enantiomer, which exhibited high activity, and the (-)-enantiomer, which exhibited low activity in an in vivo screen for dose-responsive neurotrophic efficacy.
Hit Structure

CAS Registry Number
1335461-53-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-9-ethanol, α-[[(3-methoxyphenyl)amino]methyl]-3,6-dimethyl- (CA INDEX NAME)



L25 ANSWER 30 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:623465 CAPLUS Full text
Document Number
154:264746
Title
Conjugated optoelectroactive ethynylene-carbazole polymers with TTF as pendant group
Author(s)
Zhang, Xue-Chao; Wang, Cheng-Yun; Lai, Guo-Qiao; Zhang, Lei; Shen, Yong-Jia
Patent Assignee/Corporate Source
Key Laboratory for Advanced Materials and Institute of Fine Chemicals, East China University of Science and Technology, Shanghai, 200237, Peop. Rep. China
Source
Polymer Bulletin (Heidelberg, Germany) (2011), 66(7), 893-903 CODEN: POBUDR; ISSN: 0170-0839
Document Type
Journal; (online computer file)
Language
English
Abstract
Three conjugated ethynylene-carbazole polymers with Tetrathiafulvalene (TTF) as pendant group (P1-P3) were synthesized by using sonogashira coupling reaction and characterized by 1H NMR, GPC, CV, UV-vis, FL, and TGA. CV and UV-Vis spectra showed that an intramol. interaction existed between the electron-rich moiety TTF and electron-deficient moiety polyethynylcarbazole of the polymers. A strong fluorescence quench (ca. 99%) could be observed, compared to the polyethynylene-carbazole without TTF units, which could be ascribed to the photo-induced electron transfer (PET) interaction from TTF moiety to the polyethynylene-carbazole backbone. The observed onset decomposition temps. (Td) for P1-P3 varied from 256° to 296°. The polymers mentioned above exhibited good thermal properties and higher conductivity (neutral conductivity .apprx.7-11 × 10-7 S/cm; doped conductivity .apprx.8-11 × 10-4 S/cm-1).
Hit Structure

CAS Registry Number
1339967-21-3 CAPLUS

Chemical or Trade Name
Poly[9-[4-[[9-[4,5-bis(hexylthio)-1,3-dithiol-2-ylidene]-6-(methylthio)-1,3-dithiol-4-yl]thio]hexyl]-9H-carbazole-3,6-diyl]-1,2-ethynediyl[1,1'-biphenyl]-4,4'-diyl-1,2-ethynediyl (CA INDEX NAME)

CAS Registry Number
1334639-41-4 CAPLUS

Chemical or Trade Name
3,3',6',3''-Tri-9H-carbazole, 9',9'''',9''''''-[1,3,5-triazine-2,4,6-triyltris(4,1-phenylene-3,1-propanediyl)]tris[9,9''-bis(2-methylpropyl)- (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

PAGE 2-B

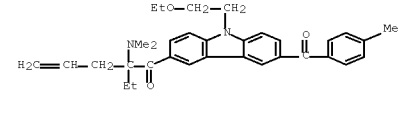
L25 ANSWER 31 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:812794 CAPLUS Full text
Document Number
153:88262
Title
3-Benzoyl-6-[1-(dimethylamino)-1-ethyl-3-butenyl]carbonyl-9-(2-ethoxyethyl)carbazoles, radical photopolymerization initiators containing them, radically polymerizable compositions, and manufacture of their polymers
Author(s)
Kamo, Masaki; Wada, Munehiro; Iwata, Kan
Patent Assignee/Corporate Source
Toyo Ink Mfg. Co., Ltd., Japan
Source
Jpn. Kokai Tokkyo Koho, 48pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2010143837	A	20100701	JP 2008-320077	20081217

Abstract
The title carbazoles are represented by I [R1-R11 = H, halo, NO2, CN, CF3, alkyl, etc.]. Thus, a composition containing Dap Tohto DT 170 (diallyl phthalate resin), dihimethylolpropane tetraacrylate, and I (all R1-R11 = H) was applied on a PET film and irradiated with UV from a Hg lamp, showing good curability.
Hit Structure

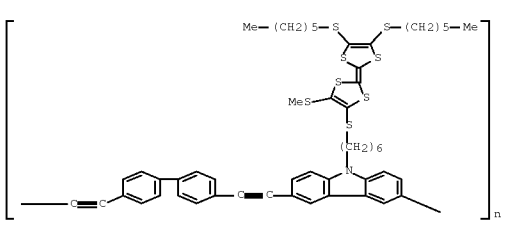
CAS Registry Number
1339757-09-0 CAPLUS

Chemical or Trade Name
4-Penten-1-one, 5-(dimethylamino)-1-[9-(3-ethoxyethyl)-6-(4-methylbenzoyl)-9H-carbazol-3-yl]-2-ethyl- (CA INDEX NAME)



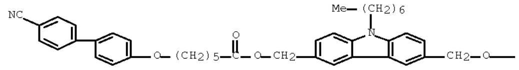
L25 ANSWER 32 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:476735 CAPLUS Full text
Document Number
154:30132
Title
Design and Synthesis of Novel Calamitic and Discotic Materials Based on the Photorefractive Carbazole Unit
Author(s)
Manikkam, M.; Iqbal, P.; Spencer, N.; Ashton, P. R.; Kumar, S.; Donovan, K. J.; Preece, J. A.
Patent Assignee/Corporate Source
School of Chemistry, The University of Birmingham, Edgbaston, Birmingham, B15 2TT, UK
Source
Molecular Crystals and Liquid Crystals (2010), 518, 84-100 CODEN: MCLCDB; ISSN: 1542-1406
Document Type
Journal
Language
English
Abstract
The incorporation of photorefractive mol. units, such as carbazole, into anisotropic materials (liquid crystals) may offer many advantages over conventional elec. poling of photorefractive polymers. Thus, a series of sym. 3,6-disubstituted carbazole derivs. with well-known biphenyl and triphenylene liquid-crystalline moieties was synthesized and characterized. These modifications were achieved by the esterification of bis(hydroxymethyl)carbazoles with alkoxybenzoyloxy-substituted carboxylic acids or alkylation of bis(bromoalkyl) derivs. of carbazole with hydroxylpentaalkoxytriphenylene. The pure compds. were not liquid-crystalline, even when doped with trinitrofluorenone, unlike triphenylenecarbazole materials that were reported previously.
Hit Structure

CAS Registry Number
1251519-49-8 CAPLUS

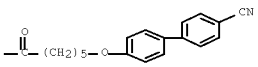


Chemical or Trade Name
Hexanoic acid, 6-[(4'-cyano[1,1'-biphenyl]-4-yl)oxy]-,
1,1'-[(9-heptyl-9H-carbazole-3,6-diyl)bis(methylene)] ester (CA INDEX
NAME)

PAGE 1-A



PAGE 1-B



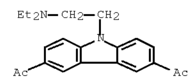
L25 ANSWER 33 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:469075 CAPLUS Full-text
Document Number
152:453945
Title
Carbazole compounds as p53 activators and their preparation, pharmaceutical compositions and use in the treatment of diseases
Author/Inventor
Tucker, John; Sviridov, Sergey; Brodsky, Leonid; Burkhart, Catherine; Purmal, Andrei; Gurova, Katerina; Gudkov, Andrei
Patent Assignee/Corporate Source
Cleveland Biolabs, Inc., USA
Source
PCT Int. Appl., 176pp. CODEN: PIXXD2
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2010042445	A1	20100415	WO 2009-US59558	20091005
AU 2009302546	A1	20100415	AU 2009-302546	20091005
CA 2736097	A1	20100415	CA 2009-2736097	20091005
KR 2011066190	A	20110616	KR 2011-7009438	20091005
EP 2356093	A1	20110817	EP 2009-793304	20091005
CN 102203063	A	20110928	CN 2009-80140333	20091005

Abstract
Carbazole compds. of formula I and their salts and hydrates as therapeutic agents are disclosed. The invention also relates to the said compds. and their use in the treatment of diseases and conditions include cancers, inflammatory diseases and conditions, and immunodeficiency diseases. Compds. of formula I wherein Ra and Rb are independently H, C1-6 (halo)alkyl, (hetero)cycloalkyl, (hetero)aryl, OR, NR2 and SR; RaR1 or RR1 may taken together with the atoms attached to form 5- to 6-membered aliphatic carbocyclic or heterocyclic ring; RbR6 or RR6 may taken together with the atoms attached to form 5- to 6-membered aliphatic carbocyclic or heterocyclic ring; Rc is H, C1-6 (hydroxy)alkyl, (hetero)cycloalkyl, (hetero)aryl, OR, NR2 and SR; RcRc1 may taken together with the nitrogen atoms attached to form 5- to 7-membered heterocyclic ring; Rc1 is H, C1-6 alkyl, (hetero)cycloalkyl, (hetero)aryl and OR; Rc1R7 may taken together with the atoms attached to form 5- to 6-membered heterocyclic ring; R is H, C1-6 alkyl, (hetero)cycloalkyl and (hetero)aryl; two R may taken together with the nitrogen atom attached to form 5- to 6-membered heterocyclic ring; R1-R6 are independently H, C1-6 alkyl, (hetero)cycloalkyl, (hetero)aryl, halo, OR, COR, COOR, OCOR, CONR2, etc.; R7 is H, H, C1-6 alkyl, (hetero)cycloalkyl and (hetero)aryl; A is (CH2)0-5; and their pharmaceutically acceptable salts and hydrates thereof, are claimed. Example compound II·HCl was prepared starting from carbazole by using acylation and cyclization as the key steps. All the invention compds. were evaluated for their p53 activating activity. From the assay, it was determined that II·HCl exhibited the EC50 value of 0.03 μM.
Hit Structure

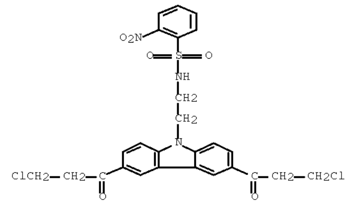
CAS Registry Number
1221238-30-7 CAPLUS

Chemical or Trade Name
Ethanone, 1,1'-[9-[2-(diethylamino)ethyl]-9H-carbazole-3,6-diyl]bis- (CA
INDEX NAME)



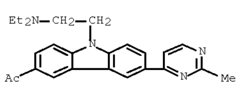
CAS Registry Number
1221239-26-4 CAPLUS

Chemical or Trade Name
Benzenesulfonamide, N-[2-[3,6-bis(3-chloro-1-oxopropyl)-9H-carbazol-9-
yl]ethyl]-2-nitro- (CA INDEX NAME)



CAS Registry Number
1221238-73-8 CAPLUS

Chemical or Trade Name
Ethanone, 1-[9-[2-(diethylamino)ethyl]-6-(2-methyl-4-pyrimidinyl)-9H-
carbazol-3-yl]- (CA INDEX NAME)

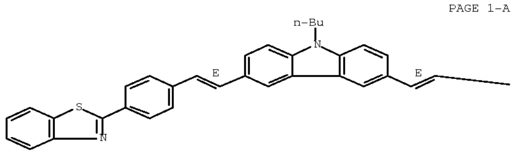


L25 ANSWER 34 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:445095 CAPLUS Full-text
Document Number
153:64294
Title
The synthesis and optical properties of benzothiazole-based derivatives with various π-electron donors as novel bipolar fluorescent compounds
Author/Inventor
Wang, Hai-Ying; Chen, Gang; Xu, Xiao-Ping; Chen, Hua; Ji, Shun-Jun
Patent Assignee/Corporate Source
Key Laboratory of Organic Synthesis of Jiangsu Province, College of Chemistry, Chemical Engineering and Materials Science, Suzhou Industrial Park, Soochow University, Suzhou, 215123, Peop. Rep. China
Source
Dyes and Pigments (2010), 86(3), 238-248 CODEN: DYPIDX; ISSN: 0143-7208
Document Type
Journal
Language
English
Abstract
Eight yellow benzothiazole-based dyes with various π-electron donors were synthesized and characterized using 1H and 13C NMR and mass spectrometry; their thermal, optical and electrochem. properties were also investigated. Optoelectronic properties are reported and discussed in terms of the distribution of the HOMO and the LUMO and the conjugative pathway between the electron-donating moieties and electron-accepting moieties. The dyes exhibited high fluorescence quantum yield, desirable HOMO levels, and high thermal stability. Quantum chemical calcns. were used to study optimized ground-state geometry as well as spatial distributions of HOMO and LUMO levels of the compds.
Hit Structure

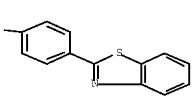
CAS Registry Number
1228794-79-3 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis[(1E)-2-[4-(2-benzothiazolyl)phenyl]ethenyl]-9-butyl-
(CA INDEX NAME)

PAGE 1-A



PAGE 1-B



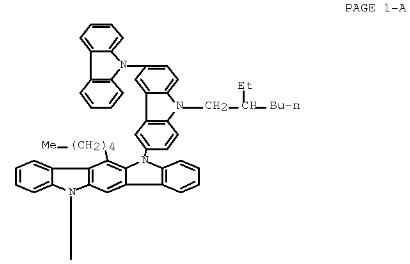
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

L25 ANSWER 35 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2010:390702 CAPLUS Full-text
Document Number
153:24497
Title
Phenyl-, carbazolyl- and fluorenyl-substituted derivatives of indolo[3,2-b]carbazole as hole-transporting glass forming materials
Author/Inventor
Kirkus, M.; Simokaitiene, J.; Grazulevicius, J. V.; Jankauskas, V.
Patent Assignee/Corporate Source
Department of Organic Technology, Kaunas University of Technology, Kaunas, LT-50254, Lithuania
Source
Synthetic Metals (2010), 160(7-8), 750-755 CODEN: SYMEDZ; ISSN: 0379-6779
Document Type
Journal
Language
English
Abstract
A series of new derivs. of indolo[3,2-b]carbazole containing Ph, fluorenyl and carbazolyl substituents at the nitrogen atoms were synthesized by Ullmann coupling of 6-pentyl-5,11-dihydroindolo[3,2-b]carbazole with the different aryl halogenides. The optical, photophys., photoelec. and thermal properties of the materials obtained were studied. All the synthesized compds. can be transformed into the amorphous phase with the glass transition temps. ranging from 0° to 154°. The ionization potentials of the newly synthesized derivs. of indolo[3,2-b]carbazole are in the range of 5.22-5.48 eV. The lowest energy absorption edges and the lowest ionization potentials were observed for carbazolyl-substituted derivs. Charge transport properties of the synthesized materials were estimated by the time-of-flight technique. The highest hole drift mobilities were observed for the fluorenyl-substituted derivative For the mol. glass of 5,11-bis(9,9-dibutyl-9H-fluoren-2-yl)-6-pentyl-5,11-dihydroindolo[3,2- b]carbazole they exceed 10-3 cm2/V s at an elec. field of 3.6 + 105 V/cm.
Hit Structure

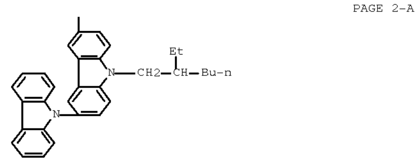
CAS Registry Number
1227936-52-8 CAPLUS

Chemical or Trade Name
Indolo[3,2-b]carbazole, 5,11-bis[9-(2-ethylhexyl)[3,9'-bi-9H-carbazol]-6-
yl]-5,11-dihydro-6-pentyl- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



L25 ANSWER 36 OF 36 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2009:1116931 CAPLUS Full-text
Document Number
154:37248
Title
Synthesis, characterization and luminescence properties of carbazole-containing platinum(II) and palladium(II) alkynyl complexes
Author/Inventor
Tao, Chi-Hang; Zhu, Nianyong; Yam, Vivian Wing-Wah
Patent Assignee/Corporate Source
Centre for Carbon-Rich Molecular and Nanoscale Metal-Based Materials Research, and Department of Chemistry, The University of Hong Kong, Hong Kong, Peop. Rep. China
Source
Journal of Photochemistry and Photobiology, A: Chemistry (2009), 207(1), 94-101 CODEN: JPPCEJ; ISSN: 1010-6030
Document Type

Journal

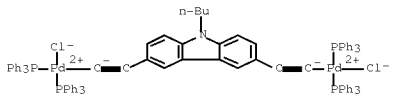
Language
English

Abstract
A series of luminescent carbazole-containing palladium(II) and platinum(II) alkynyl complexes, has been successfully synthesized and characterized. Through a systematic comparison study, the emission of the platinum(II) bis-alkynyl complexes, has been assigned to originate from an admixt. of 3IL/3MLCT excited states with predominantly IL character.

Hit Structure

CAS Registry Number
1257662-29-5 CAPLUS

Chemical or Trade Name
INDEX NAME NOT YET ASSIGNED



CAS Registry Number
1257662-40-0 CAPLUS

Chemical or Trade Name
INDEX NAME NOT YET ASSIGNED

CM
1

CRN 1257662-29-5
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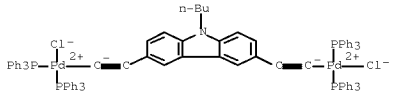
CCI CCS



CM
2

CRN 64-17-5
CMF C2 H6 O

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

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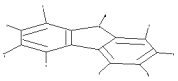

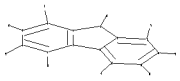

chain nodes :
14 16 17 18 19 20 21 22 23
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds :
1-12 2-22 3-17 4-16 7-14 10-21 11-20 12-23 17-19
ring bonds :
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exact/norm bonds :
8-23 5-7 7-8 7-14 13-23
exact bonds :
1-12 3-17 4-16 6-9 10-21 11-20 13-19
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 6-9 8-10 9-13 10-11 11-12 12-13
isolated ring systems :
containing 1 :

Gl:Ch,Hy,Ac,N,H

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS

L26 STRUCTURE UPLOADED

=> s L26
SAMPLE SEARCH INITIATED 16:26:24 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 7349 TO ITERATE

100.0% PROCESSED 7349 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 161446 TO 162320
PROJECTED ANSWERS: 29445 TO 34175

L27 50 SEA SSS SAM L26

=> s L27
L29 11 L27

=> L29 and (pyr<=2004)
25144147 PY<=2004
L29 0 L29 AND (PY<=2004)

=>

chain nodes :
14 16 17
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds :
9-16 7-14 13-17
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 8-10 9-13 10-11 11-12 12-13
exact/norm bonds :
9-16 5-7 7-8 7-14 13-17
exact bonds :
6-9
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-10 9-13 10-11 11-12 12-13
isolated ring systems :
containing 1 :

Gl:Ch,Hy,Ac,N,H

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:CLASS 16:CLASS 17:CLASS

L30 STRUCTURE UPLOADED

=> s L30 sss full
FULL SEARCH INITIATED 16:30:10 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 145695 TO ITERATE

100.0% PROCESSED 145695 ITERATIONS 30449 ANSWERS
SEARCH TIME: 00.00.01

L31 30449 SEA SSS FUL L30

=> s L26 sss full
FULL SEARCH INITIATED 16:30:38 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 145695 TO ITERATE

100.0% PROCESSED 145695 ITERATIONS 39057 ANSWERS
SEARCH TIME: 00.00.01

L32 39057 SEA SSS FUL L26

=> s L33 sss full
FULL SEARCH INITIATED 16:32:03 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 145695 TO ITERATE

100.0% PROCESSED 145695 ITERATIONS 5122 ANSWERS
SEARCH TIME: 00.00.01

L33 5122 SEA SSS FUL L23

=> s L33
L34 3392 L33

=> L34 and (electroluminescence or electroluminescent or (light emitting) or OLED)
30860 ELECTROLUMINESCENCE
99 ELECTROLUMINESCENCES
30864 ELECTROLUMINESCENCE
(ELECTROLUMINESCENCE OR ELECTROLUMINESCENCES)
5 ELECTROLUMINESCENSE
30865 ELECTROLUMINESCENCE
(ELECTROLUMINESCENCE OR ELECTROLUMINESCENSE)
113581 ELECTROLUMINESCENT
8 ELECTROLUMINESCENTS
113584 ELECTROLUMINESCENT
(ELECTROLUMINESCENT OR ELECTROLUMINESCENTS)
1467956 LIGHT
14706 LIGHTS
1469937 LIGHT
(LIGHT OR LIGHTS)
172870 EMITTING
393 EMITTINGS
173234 EMITTING
(EMITTING OR EMITTINGS)
99577 LIGHT EMITTING
(LIGHT(W)EMITTING)
9980 OLED
4816 OLEDS
12437 OLED
(OLED OR OLEDS)
L35 384 L34 AND (ELECTROLUMINESCENCE OR ELECTROLUMINESCENT OR (LIGHT EMITTING) OR OLED)

=> L35 and ((hole transporting) or (hole injection) or (hole transportation) or (hole injecting) or (charge injection) or (charge transporting) or (charge injecting) or (charge transportation))
257297 HOLE
204857 HOLES
457540 HOLE
(HOLE OR HOLES)
66271 TRANSPORTING
5470 HOLE TRANSPORTING
(HOLE(W)TRANSPORTING)
257297 HOLE
204857 HOLES
457540 HOLE
(HOLE OR HOLES)
647512 INJECTION
156799 INJECTIONS
743573 INJECTION
(INJECTION OR INJECTIONS)
5442 HOLE INJECTION
(HOLE(W)INJECTION)
257297 HOLE
204857 HOLES
457540 HOLE
(HOLE OR HOLES)
54185 TRANSPORTATION
115 TRANSPORTATIONS
54261 TRANSPORTATION
(TRANSPORTATION OR TRANSPORTATIONS)
110 HOLE TRANSPORTATION
(HOLE(W)TRANSPORTATION)
257297 HOLE
204857 HOLES
457540 HOLE
(HOLE OR HOLES)
62091 INJECTING
1136 HOLE INJECTING
(HOLE(W)INJECTING)
664709 CHARGE
86040 CHARGES
713231 CHARGE
(CHARGE OR CHARGES)
647512 INJECTION
156799 INJECTIONS
743573 INJECTION
(INJECTION OR INJECTIONS)
4056 CHARGE INJECTION
(CHARGE(W)INJECTION)
664709 CHARGE
86040 CHARGES
713231 CHARGE
(CHARGE OR CHARGES)
66271 TRANSPORTING
5760 CHARGE TRANSPORTING
(CHARGE(W)TRANSPORTING)
664709 CHARGE
86040 CHARGES
713231 CHARGE
(CHARGE OR CHARGES)
62091 INJECTING
165 CHARGE INJECTING
(CHARGE(W)INJECTING)
664709 CHARGE
86040 CHARGES
713231 CHARGE
(CHARGE OR CHARGES)
54185 TRANSPORTATION
115 TRANSPORTATIONS
54261 TRANSPORTATION
(TRANSPORTATION OR TRANSPORTATIONS)
151 CHARGE TRANSPORTATION
(CHARGE(W)TRANSPORTATION)
L36 97 L35 AND ((HOLE TRANSPORTING) OR (HOLE INJECTION) OR (HOLE TRANSPORTATION) OR (HOLE INJECTING) OR (CHARGE INJECTION) OR (CHARGE TRANSPORTING) OR (CHARGE INJECTING) OR (CHARGE TRANSPORTATION))

=> L36 and (pyr<=2004)
25144147 PY<=2004
L37 39 L36 AND (PY<=2004)

=> L35 and (pyr<=2004)
25144147 PY<=2004
L38 154 L35 AND (PY<=2004)

=> d ibib abs hitstr 1-
YOU HAVE REQUESTED DATA FROM 154 ANSWERS - CONTINUE Y/(N):y

L38 ANSWER 1 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2005:344276 CAPLUS full text
Document Number
142:400236
Title
Carbazole derivatives used as host material of phosphorescent substance in organic electroluminescent devices
Author(s)
Chiu, Yung; Chiao, Chuan; Wang, Chien-Hua; Wang, Li-Tuo; Tsai, Lieh; Lai, Kang-Tieh
Patent Assignee(s)
Corporate Source
Ching-Hua University, Rep. Rep. China; Beijing Wei-Xin-nuo Science and Technology Co., Ltd.
Source
Jpn. Kokai Tokkyo Koho, 37 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

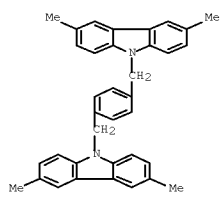
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005104971	A	20050421	JP 2004-256365	20040906
CN 1493312	A	20040421	CN 2003-156364	20030905
CN 100335462	C	20070905		
US 20050127826	A1	20050616	US 2004-933867	20040903
US 7227027	B2	20070605		

Abstract
Disclosed is a carbazole derivative, suited for use as a host material of a phosphorescent substance in an organic electroluminescent device, characterized in that the glass transition temperature and the lowest excited triplet state energy are 70-220 °C and ≥2.62 eV, resp., and represented by (Y = linking group containing alkylene, arylene, and spiro structure; and R1-18 = H, alkyl, alkoxy, etc.).

Hit Structure

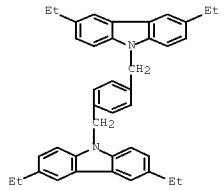
CAS Registry Number
149085-25-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9,9'-[1,4-phenylenebis(methylene)]bis[3,6-dimethyl- (9CI)
(CA INDEX NAME)



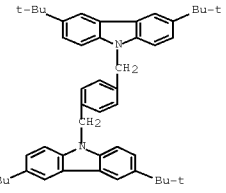
CAS Registry Number
149085-26-6 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9,9'-[1,4-phenylenebis(methylene)]bis[3,6-diethyl- (9CI)
(CA INDEX NAME)



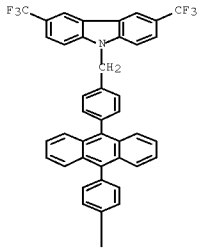
CAS Registry Number
849020-57-7 CAPLUS

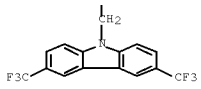
Chemical or Trade Name
9H-Carbazole, 9,9'-[1,4-phenylenebis(methylene)]bis[3,6-bis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



CAS Registry Number
849020-48-0 CAPLUS

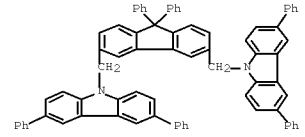
Chemical or Trade Name
9H-Carbazole, 9,9'-[9,10-anthracenediylbis(4,1-phenylenemethylene)]bis[3,6-bis(trifluoromethyl)- (9CI) (CA INDEX NAME)





CAS Registry Number
849020-59-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9,9'-[(9,9-diphenyl-9H-fluorene-3,6-diyl)bis(methylene)]bis[3,6-diphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

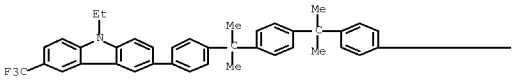
L36 ANSWER 2 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:1031843 CAPLUS full text
Document Number
142:29775
Title
Organic electroluminescent (EL) device and electroluminescent display (ELD) and illumination assembled with the same
Author(s)/Inventor
Ueda, Noriko; Yamada, Takeiichi; Oshiyama, Tomohiro; Kita, Hiroshi
Patent Assignee/Corporate Source
Konica Minolta Holdings, Inc., Japan
Source
Jpn. Kokai Tokkyo Koho, 61 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

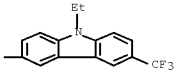
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004342391	A	20041202	JP 2003-135706	20030514
JP 4305046	B2	20090729		

Abstract
The electroluminescent device has a light-emitting layer containing phosphorescent compds. and involves 9-azafluorene derivs. represented by the general formula I (A = alkyl, cycloalkyl, alkyl, aryl, heteroaryl; R1, R2 = H, substituent; na = 0-4 integer; nb = 0-3 integer; n = 2-4 integer; L = n-valent linking group), preferably, in the light-emitting layer. The EL device shows high luminance and long half life.
HI Structure

CAS Registry Number
799559-74-3 CAPLUS

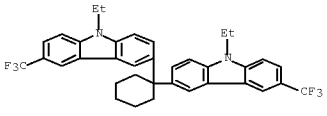
Chemical or Trade Name
9H-Carbazole, 3,3'-[1,4-phenylenebis[(1-methylethylidene)-4,1-phenylene]bis[9-ethyl-6-(trifluoromethyl)- (9CI) (CA INDEX NAME)





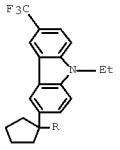
CAS Registry Number
799559-99-8 CAPLUS

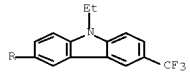
Chemical or Trade Name
9H-Carbazole, 3,3'-cyclohexylidenebis[9-ethyl-6-(trifluoromethyl)- (CA INDEX NAME)



CAS Registry Number
799560-03-5 CAPLUS

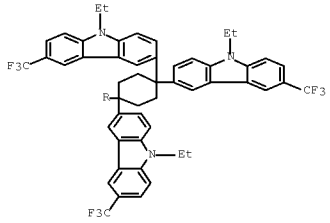
Chemical or Trade Name
9H-Carbazole, 3,3'-cyclopentylidenebis[9-ethyl-6-(trifluoromethyl)- (CA INDEX NAME)

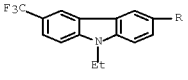




CAS Registry Number
799560-10-4 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,3',3'',3'''-(1,4-cyclohexanediylidene)tetrakis[9-ethyl-6-(trifluoromethyl)- (9CI) (CA INDEX NAME)

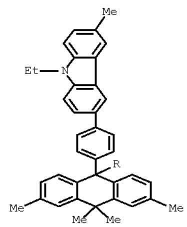




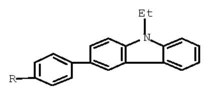
CAS Registry Number
799560-20-6 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-ethyl-3-[4-[3-[4-(9-ethyl-9H-carbazol-3-yl)phenyl]-9,10-dihydro-9,9,10,10-tetramethyl-9-anthracenyl]phenyl]-6-methyl- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L38 ANSWER 3 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2004:1024469 CAPLUS Full-text

Document Number
142:165089

Title
Electroluminescent behavior of polydiacetylene films

Author/Inventor
Giorgetti, Emilia; Sottini, Stefano; Del Rosso, Tommaso; Margheri, Giancarlo; Alloisio, Marina; Dellepiane, Giovanna

Patent Assignee/Corporate Source
INSTM and Istituto di Fisica Applicata "Nello Carrara", CNR, Florence, 50127, Italy

Source
Synthetic Metals (2004), 147(1-3), 271-274 CODEN: SYMEDZ; ISSN: 0379-6779

Document Type
Journal

Language
English

Abstract
We observed the electroluminescent behavior of films of the polydiacetylene poly[1,6-bis(3,6-dipalmitoyl-N-carbazolyl)-2,4-hexadiyne] (polyDPCHD) by preparing organic light-emitting diodes (OLED) based on a single emitting polymer layer. We measured their optical and elec. characteristics and obtained a typical power efficiency of 10-6. The observed rapid quenching of the electroluminescence was supposed to be related to the formation of charged traps enhanced both by local disorder of polymer chains and by current flow.

Hit Structure

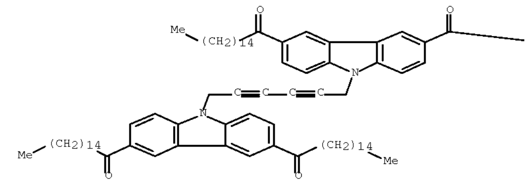
CAS Registry Number
434914-04-2 CAPLUS

Chemical or Trade Name
1-Hexadecanone, 1,1',1'',1'''-(2,4-hexadiyne-1,6-diyldi-9H-carbazole-9,3,6-triyl)tetrakis-, homopolymer (9CI) (CA INDEX NAME)

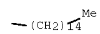
CM
1

CRN 434914-03-1
CMF C94 H140 N2 O4

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L38 ANSWER 4 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2004:1016012 CAPLUS Full-text

Document Number
142:13467

Title
Carbazole derivative, organic semiconductor device, light-emitting device, and electronic device

Author/Inventor
Nomura, Ryoji; Seo, Satoshi; Nakashima, Harue

Patent Assignee/Corporate Source
Semiconductor Energy Laboratory Co., Ltd., Japan

Source
PCT Int. Appl., 61 pp. CODEN: PIXXD2

Document Type
Patent

Language
Japanese

Patent Information

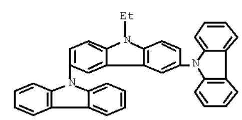
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004101517	A1	20041125	WO 2004-JP6435	20040513
US 20050031899	A1	20050210	US 2004-839123	20040506
US 7504162	B2	20090317		
JP 4558510	B2	20101006	JP 2004-567661	20040513

Abstract
A carbazole derivative with excellent heat resistance which can be formed into a film without being crystallized is disclosed. An organic semiconductor, a light-emitting device and an electronic devices manufactured by using such a carbazole derivative are also disclosed.

Hit Structure

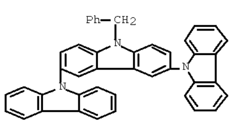
CAS Registry Number
797057-70-6 CAPLUS

Chemical or Trade Name
9,3':6',9''-Ter-9H-carbazole, 9'-ethyl- (9CI) (CA INDEX NAME)



CAS Registry Number
797057-71-7 CAPLUS

Chemical or Trade Name
9,3':6',9''-Ter-9H-carbazole, 9'-(phenylmethyl)- (9CI) (CA INDEX NAME)



L38 ANSWER 5 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2004:985920 CAPLUS Full-text

Document Number
141:417582

Title
Blue light-emitting compounds, blue light-emitting polymers, processes of preparing the blue light- emitting compounds and luminescent element including the blue light-emitting polymers

Author/Inventor
Nakaya, Tadao; Tobita, Michiaki; Saikawa, Tomoyuki; Ishitobi, Tatsuro; Ushijima, Takashi; Takano, Shinji; Tajima, Akio

Patent Assignee/Corporate Source
Hirose Engineering Co., Ltd., Japan

Source
Eur. Pat. Appl., 108 pp. CODEN: EPXXDW

Document Type
Patent

Language
English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1477544	A2	20041117	EP 2004-102113	20040513
EP 1477544	A3	20061206		
US 20040234814	A1	20041125	US 2004-844352	20040513
JP 2005154404	A	20050616	JP 2004-143337	20040513

Abstract
Blue-light-emitting compds. are described which comprise substituted N-vinylcarbazoles and polymers containing repeating units formed from substituted N-vinyl carbazole monomers. Methods for preparing the N-vinyl carbazole derivs. are described which entail reacting a halogen compound with a hydrazide to produce an intermediate; dehydrating the intermediate; and dehydrohalogenating the dehydrated intermediate. Alternately, a Friedel-Crafts reaction may be carried out with an appropriate halogen compound to produce an organic halogen which can then be dehydrohalogenated to produce the desired compound. Luminescent elements with light-emitting layers comprising the polymers are also described.

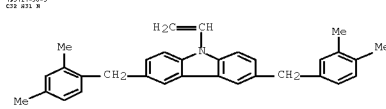
Hit Structure

CAS Registry Number
793717-59-6 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3-[(2,4-dimethylphenyl)methyl]-6-[(3,4-dimethylphenyl)methyl]-9-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM
1

CRN 793717-58-5
CMF C32 H31 N

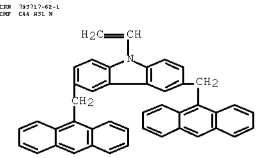


CAS Registry Number
793717-64-3 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(9-anthracenylmethyl)-9-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

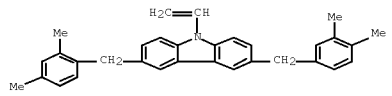
CM
1

CRN 793717-62-1
CMF C44 H31 N



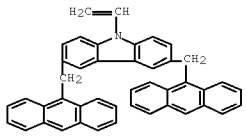
CAS Registry Number
793717-58-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3-[(2,4-dimethylphenyl)methyl]-6-[(3,4-dimethylphenyl)methyl]-9-ethenyl- (CA INDEX NAME)



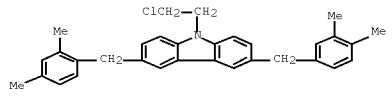
CAS Registry Number
793717-62-1 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(9-anthracenylmethyl)-9-ethenyl- (CA INDEX NAME)



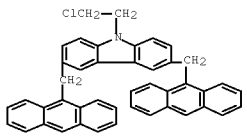
CAS Registry Number
793717-57-4 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-chloroethyl)-3-[(2,4-dimethylphenyl)methyl]-6-[(3,4-dimethylphenyl)methyl]- (CA INDEX NAME)



CAS Registry Number
793717-60-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(9-anthracenylmethyl)-9-(2-chloroethyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

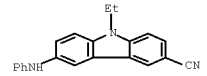
L36 ANSWER 6 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:575456 CAPLUS Full-text
Document Number
142:122672
Title

New Carbazole-Oxadiazole Dyads for Electroluminescent Devices: Influence of Acceptor Substituents on Luminescent and Thermal Properties

Author(s)/Inventor
Thomas, K. R. Justin; Lin, Jiann T.; Tao, Ya-Tai; Chuen, Chang-Hao
Patent Assignee/Corporate Source
Institute of Chemistry, Academia Sinica, Taipei, Taiwan
Source
Chemistry of Materials (2004), 16(25), 5437-5444 CODEN: CMATEX; ISSN: 0897-4756
Document Type
Journal
Language
English
Abstract
Carbazole-oxadiazole dyads linked by amino functionality is prepared in good yields by C-N coupling reactions catalyzed by Pd(dba)2/P(t-Me)3 under basic conditions in toluene. The compds. possess addnl. electron-withdrawing groups such as CF3 and CN either on oxadiazole or on carbazole nucleus. The placement of CF3 on the oxadiazole end enhances the electron deficiency of the oxadiazole unit, while the CN substituent at the carbazole nucleus decreases the donor strength of carbazole. This results in slight alterations in the oxidation potentials and thermal properties of the resulting dyads. This also leads to a pathway for fine-tuning the energy levels and amorphous morphol. in these dyads. While CN groups affect by appx. 0.2 eV the energy levels, a counterproductive Tg reduction/thermal instability is observed for the CF3 derivs. All of these derivs. display solvent-dependent emission profiles with the solid-state emission occurring in the cyan region. Electroluminescent devices fabricated using these compds. as hole-transporting layer and Alq3 or TPBI as the electron-transporting layer emit cyan color. The emission in most cases arises from the HTL layer. However, slight distortions in shape and peak position of the EL spectra were noticed, which were attributed to either the mixing of emissions from HTL and ETL layer or the complex formation between the HTL and ETL materials. Energetics governing the confinement of excitons in the emissive layer is critically analyzed.
Hit Structure

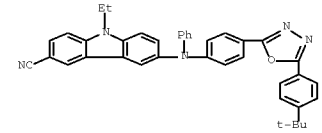
CAS Registry Number
921807-49-9 CAPLUS

Chemical or Trade Name
9H-Carbazole-3-carbonitrile, 9-ethyl-6-(phenylamino)- (CA INDEX NAME)



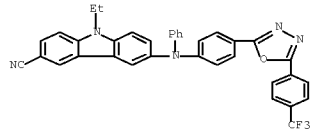
CAS Registry Number
921807-58-3 CAPLUS

Chemical or Trade Name
9H-Carbazole-3-carbonitrile, 6-[[4-[5-[4-[[1,1-dimethylethyl]phenyl]-1,3,4-oxadiazol-2-yl]phenyl]phenylamino]-9-ethyl- (CA INDEX NAME)



CAS Registry Number
921807-59-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3-carbonitrile, 9-ethyl-6-[phenyl[4-[5-[4-(trifluoromethyl)phenyl]-1,3,4-oxadiazol-2-yl]phenyl]amino]- (CA INDEX NAME)



OS.CITING REF COUNT: 19 THERE ARE 19 CAPLUS RECORDS THAT CITE THIS RECORD (19 CITINGS)

L36 ANSWER 7 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number

2004:642711 CAPLUS Full-text
Document Number
141:340137
Title

White-emitting organic electroluminescent device with high emission efficiency and long service life and its display and illumination

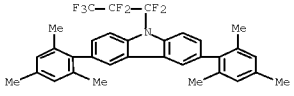
Author(s)/Inventor
Kita, Hiroshi
Patent Assignee/Corporate Source
Konica Minolta Holdings, Inc., Japan
Source
Jpn. Kokai Tokkyo Koho, 41 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004288380	A	20041014	JP 2003-75511	20030319
JP 4508086	B2	20100721		

Abstract
The organic EL device contains carbazol derivs. represented by the general formula I (R1 = H, substituent, F-containing alkyl; when R1 = H or substituent, ≥1 of R2-R9 = F or F-containing alkyl and other R2-R9 = H or substituent; when R1 = F-containing alkyl, R2-R9 = H or substituent). The organic EL device will contain I and phosphorescent dopants in the light-emitting layer.
Hit Structure

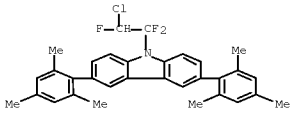
CAS Registry Number
773156-54-0 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(1,1,2,3,3,3-heptafluoropropyl)-3,6-bis(2,4,6-trimethylphenyl)- (CA INDEX NAME)



CAS Registry Number
773156-55-1 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-chloro-1,1,2-trifluoroethyl)-3,6-bis(2,4,6-trimethylphenyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L36 ANSWER 8 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:642710 CAPLUS Full-text
Document Number
141:340136
Title

White-emitting organic electroluminescent device and display and illumination assembled with the same

Author(s)/Inventor
Kinoshita, Motoki; Yamada, Takahiro; Kita, Hiroshi
Patent Assignee/Corporate Source
Konica Minolta Holdings, Inc., Japan
Source
Jpn. Kokai Tokkyo Koho, 46 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

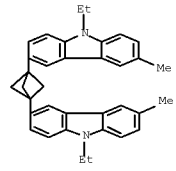
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004288379	A	20041014	JP 2003-75500	20030319
JP 3907937	B2	20070724		

Abstract
The organic EL device contains a light-emitting layer containing host compds., phosphorescent compds., and dopant compds., wherein any of the device-constituting layer contains compds. containing bicyclo[1.1.1]pentane skeleton, preferably, a compound represented by the general formula I (R1-R6 = H, alkyl, aryl, alkoxy, aryloxy, alkylthio, arylthio, amino, alkylamino, arylamino, heterocycle, silyl), preferably, as the host compds. of the light-emitting layer or in a layer adjacent to the light-emitting layer. Preferably, the phosphorescent compds. comprise Ir compds., Os compds., or Pt compds.

Hit Structure

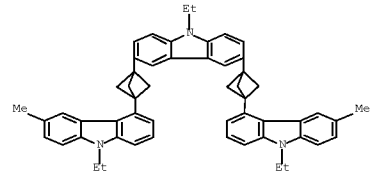
CAS Registry Number
773148-57-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,3'-bicyclo[1.1.1]pentane-1,3-diylbis[9-ethyl-6-methyl- (9CI) (CA INDEX NAME)



CAS Registry Number
773148-60-0 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-ethyl-3,6-bis[3-(9-ethyl-6-methyl-9H-carbazol-4-yl)bicyclo[1.1.1]pent-1-yl]- (CA INDEX NAME)



L38 ANSWER 9 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

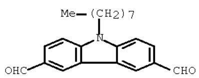
Accession Number
2004:786349 CAPLUS Full-text
Document Number
142:240767
Title
New disilyl-substituted poly(phenylenevinylene)-related polymers: synthesis and photoelectric properties
Author/Inventor
Zhang, Qinghui; Yang, Mujie; Wu, Peng; Ye, Hui; Liu, Xu
Patent Assignee/Corporate Source
Department of Polymer Science and Engineering, Zhejiang University, Hangzhou, 310027, Peop. Rep. China
Source
Materials Science & Engineering, B: Solid-State Materials for Advanced Technology (2004), B113(2), 130-135 CODEN: MSBTEK; ISSN: 0921-5107
Document Type
Journal
Language
English
Abstract
A new class of disilyl-substituted poly(phenylenevinylene)-related copolymers (CN-Si-Carb-PPV, CN-Si-Ph-PPV) was synthesized by a simple condensation polymerization route. The UV-vis absorption of the polymers has strong absorption bands, which corresponds to the π-π* transition of π-conjugated segment. Photoluminescence (PL) spectra show that the emission peaks of two polymer films both have about 100 nm bathochromic shifts compared to the polymer solution. Single-layer light-emitting diodes (LED) were fabricated, which showed lower threshold voltage. The devices both emitted green light.
Hit Structure

CAS Registry Number
845301-85-1 CAPLUS

Chemical or Trade Name
1,4-Benzenediacetonitrile, 2,5-bis(trimethylsilyl)-, polymer with 9-octyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

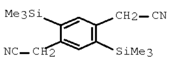
CM 1

CRN 319018-43-4
CMF C22 H25 N O2



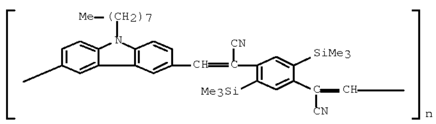
CM 2

CRN 247121-77-3
CMF C16 H24 N2 Si2



CAS Registry Number
845301-88-4 CAPLUS

Chemical or Trade Name
Poly[(9-octyl-9H-carbazole-3,6-diyl)(2-cyano-1,2-ethenediyl)[2,5-bis(trimethylsilyl)-1,4-phenylene](1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 10 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

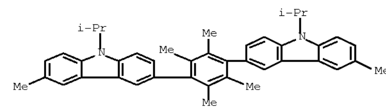
Accession Number
2004:739385 CAPLUS Full-text
Document Number
141:268179
Title
Long-life white-emitting organic electroluminescent devices, displays, illumination apparatus, and electric appliances therewith
Author/Inventor
Fukuda, Mitsuhiro; Genda, Kazuo
Patent Assignee/Corporate Source
Konica Minolta Holdings, Inc., Japan
Source
Jpn. Kokai Tokkyo Koho, 577 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004253298	A	20040909	JP 2003-43660	20030221
JP 4590825	B2	20101201		
JP 2009055053	A	20090312	JP 2008-262504	20081009

Abstract
The devices have, in their constituent layers (e.g., emitting layers, hole- or electron-transporting layers), (i) compds. represented by X1R1C:CR2X2 [X1, X2 = aryl, heterocycle; R1, R2 = aryl, heterocyclic hydrocarbyl, cycloalkoxy (R1 = R2 = aryl)], R11R12R13R14R15P (R11-R15 = monovalent substituent), Ar2Ar1C6H4(m-Ar1Ar2) [Ar1 = bivalent aromatic hydrocarbylene; Ar2 = (substituted) Ph; H atom on the benzene ring may be substituted with (cyclo)alkyl, alkoxy, or halo], Z(ArQ)n [Q = (substituted) o-(2-pyridyl)phenyl; Z = n-valent bridging group, single bond; Ar = bivalent arylene; n = 2-8], etc., (ii) fluorescent compds. with mol. weight 500-2000 and atomic ratio F/(F + H) 0-0.9 and having fluorescent peak at ≤415 nm, (iii) polysilanes (R21R22Si)n [R21, R22 = alkyl(oxy), aromatic group, aryloxy; n1 ≥3] or [R31(Ar31NR32R33)Si]n [R31 = alkyl(oxy), aromatic group, aryloxy; R32, R33 = alkyl, aromatic group; Ar31 = arylene; n2 ≥3], and/or (iv) fluorescent compds. satisfying atomic ratio N/C 0-0.05. The devices, having phosphorescent dopants I (Z11 = aromatic azacycle; Z12 = nonarom. ring, 5-membered aromatic ring, azulene; M = metal), II (Z21, Z22 = aromatic azacycle; M = metal), or III (Z41 = azacycle; Z42 = ring; M = metal) in emitting layers, are also claimed. The devices exhibit high luminescent efficiency and substantially white emission, and are suited for light source uses, especially of LCD.
Hit Structure

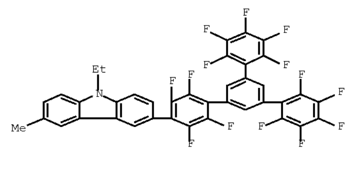
CAS Registry Number
669072-36-0 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,3'-(2,3,5,6-tetramethyl-1,4-phenylene)bis[6-methyl-9-(1-methylethyl)- (CA INDEX NAME)



CAS Registry Number
669072-60-0 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-ethyl-3-methyl-6-[2,2'',3,3'',4'',5,5'',6,6''-nonafluoro-5'-(pentafluorophenyl)[1,1':3',1''-terphenyl]-4-yl]- (9CI) (CA INDEX NAME)



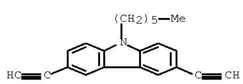
OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

L38 ANSWER 11 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2004:703189 CAPLUS Full-text
Document Number
141:366260
Title
Stereoselective Hydroboration of Diynes and Triyne to Give Products Containing Multiple Vinylene Bridges: A Versatile Application to Fluorescent Dyes and Light-Emitting Copolymers
Author/Inventor
Lee, Taegweon; Baik, Chul; Jung, Il; Song, Kyu Ho; Kim, Sanghoon; Kim, Duckhyun; Kang, Sang Ook; Ko, Jaejung
Patent Assignee/Corporate Source
Department of Chemistry, Korea University, Chungnam, 339-700, S. Korea
Source
Organometallics (2004), 23(20), 4569-4575 CODEN: ORGND7; ISSN: 0276-7333
Document Type
Journal
Language
English
Abstract
The Rh(I)-catalyzed hydroboration of a variety of aromatic diynes and a triyne afforded bis(boryl)- and tris(boryl)vinyl products. The hydroboration products underwent Suzuki cross-coupling reactions with a variety of substrates containing chromophore units to give fluorescent dye-substituted products. The hydroboration product also reacted with dibromoarenes to afford an oligomer with a vinylene unit along the oligomer backbone.
Hit Structure

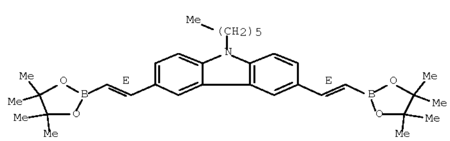
CAS Registry Number
156972-68-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-hexyl- (CA INDEX NAME)



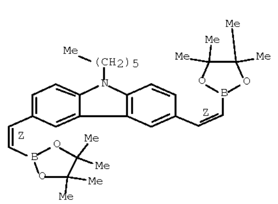
CAS Registry Number
779357-36-7 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-hexyl-3,6-bis[(1E)-2-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)ethenyl]- (CA INDEX NAME)



CAS Registry Number
779357-45-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-hexyl-3,6-bis[(1Z)-2-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)ethenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

L38 ANSWER 12 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

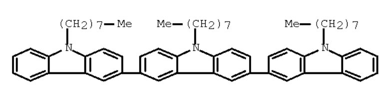
Accession Number
2004:698199 CAPLUS Full-text
Document Number
141:232971
Title
Carbazole compounds and use of such compounds in organic electroluminescent devices
Author/Inventor
Brunner, Klemens; De Kok-Van Breemen, Margaretha M.; Langeveld, Bea M. W.; Kiggen, Nicole M. M.; Bastiaansen, Jolanda J. A. M.; Hofstraat, Johannes W.; Boerner, Herbert F.; Schoo, Hermannus F. M.
Patent Assignee/Corporate Source
Koninklijke Philips Electronics N.V., Neth.
Source
PCT Int. Appl., 56 pp. CODEN: PIXXD2
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004072205	A2	20040826	WO 2004-IB50049	20040123
WO 2004072205	A3	20040916		
EP 1594939	A2	20051116	EP 2004-704695	20040123
CN 1748017	A	20060315	CN 2004-80003951	20040123
JP 2006520409	T	20060907	JP 2006-502540	20040123
US 20060073357	A1	20060406	US 2005-545205	20050810

Abstract
Carbazole compds., polymeric or of low mol. weight, are described which comprise a carbazole multimer unit are described by the general formula I (n ≥ 2) wherein each carbazole unit may be unsubstituted or substituted with ≥1 substituents. Combinations of the with a light-emitting compound, especially a triplet emitter, capable of accepting energy from the carbazole compound are also described. Electroluminescent devices are described which employ the carbazole compds. or the combinations.
Hit Structure

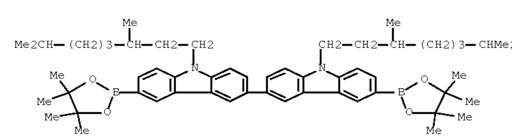
CAS Registry Number
628336-90-3 CAPLUS

Chemical or Trade Name
3,3':6',3''-Ter-9H-carbazole, 9,9',9''-trioctyl- (9CI) (CA INDEX NAME)



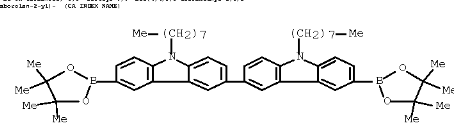
CAS Registry Number
714972-52-6 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 9,9'-bis(3,7-dimethyloctyl)-6,6'-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (CA INDEX NAME)



CAS Registry Number
746651-55-8 CAPLUS

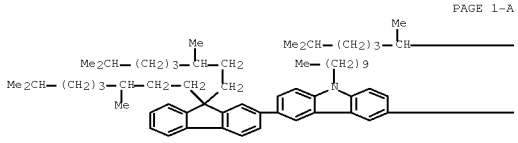
Chemical or Trade Name
3,3'-Bi-9H-carbazole, 9,9'-dioctyl-6,6'-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (CA INDEX NAME)



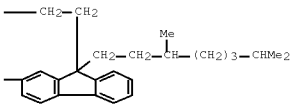
CAS Registry Number
746651-59-2 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis[9,9-bis(3,7-dimethyloctyl)-9H-fluoren-2-yl]-9-decyl- (CA INDEX NAME)

PAGE 1-A



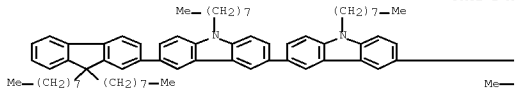
PAGE 1-B



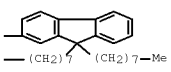
CAS Registry Number
146661-60-5 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 6,6'-bis(9,9-dioctyl-9H-fluoren-2-yl)-9,9'-dioctyl-
(CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 0 THERE ARE 0 CAPLUS RECORDS THAT CITE THIS RECORD
(13 CITINGS)

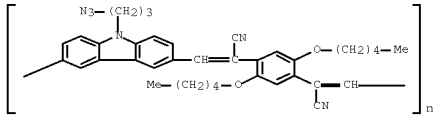
L38 ANSWER 13 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:623369 CAPLUS Full-text
Document Number
141:164623
Title
Nanostructured-doped compound for use in an EL element
Author(s)/Inventor
Carew, Richard; Carroll, David; Hoshi, Sakutaro
Patent Assignee/Corporate Source
Clemson University, USA; Yazaki Corporation
Source
U.S. Pat. Appl. Publ., 11 pp. CODEN: USXXCO
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040150328	A1	20040805	US 2003-356702	20030131
US 6833201	B2	20041221		
JP 2004231959	A	20040819	JP 2004-12789	20040121

Abstract
A compound for use in an electro luminescent (EL) device. The compound includes a first substance in combination with a second substance. The first substance includes nanostructures in combination with an equal weight percentage of PPV derivative, whereas the second substance is a PPV derivative The first substance makes up from greater than 0 wt % to about 3 wt % of the compound, whereas the second substance makes up the remainder. Also, an EL device made from the compound, and a method of making the EL device, are disclosed.
Hit Structure

CAS Registry Number
332865-51-7 CAPLUS

Chemical or Trade Name
Poly[3-[3-methoxypropyl-9H-carbazole-3,6-diyl[(2-cyano-1,2-ethenediyl)[3,5-
bis[pentyloxy]-1,4-phenylene][1-cyano-1,2-ethenediyl]] (9CI) (CA INDEX
NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD
(5 CITINGS)

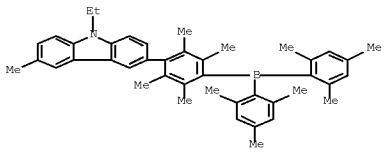
L38 ANSWER 14 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:612383 CAPLUS Full-text
Document Number
141:164555
Title
Organic electroluminescent device and display
Author(s)/Inventor
Hiroshita, Motoshi; Yamada, Takahoshi; Kita, Hiroshi
Patent Assignee/Corporate Source
Konica Minolta Holdings, Inc., Japan
Source
Jpn. Kokai Tokkyo Koho, 53 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004214650	A	20040729	JP 2003-399	20030106
JP 4363210	B2	20091030		

Abstract
The invention refers to an organic electroluminescent device and display containing the compound A(X)n (A, B = univalent substituent; X = mvalent bridging group; A and B include hetero-atoms; l + n = 2 - 6; l ≥ 1' n ≥ 1].
Hit Structure

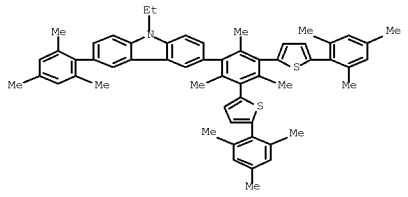
CAS Registry Number
720006-04-6 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3-[4-[bis(2,4,6-trimethylphenyl)boryl]-2,3,5,6-
tetramethylphenyl]-9-ethyl-6-methyl- (9CI) (CA INDEX NAME)



CAS Registry Number
720006-06-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-ethyl-3-[3,4,6-trimethyl-2,5-bis[5-(2,4,6-trimethylphenyl)-
2-thienyl]phenyl]-6-(2,4,6-trimethylphenyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 0 THERE ARE 0 CAPLUS RECORDS THAT CITE THIS RECORD
(0 CITINGS)

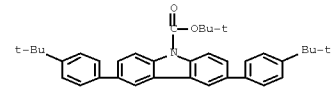
L38 ANSWER 15 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:606260 CAPLUS Full-text
Document Number
141:164541
Title
Diphenylanthracene derivative for organic electroluminescent device
Author(s)/Inventor
Lee, Ji Hoon; Lee, Soo Hoon; Sohn, Joon Mo
Patent Assignee/Corporate Source
Samsung SDI Co., Ltd., S. Korea
Source
Jpn. Kokai Tokkyo Koho, 34 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004210786	A	20040729	JP 2004-691	20040105
JP 4077797	B2	20080423		
KR 2004062260	A	20040707	KR 2003-49	20030102
US 20040146748	A1	20040729	US 2004-749390	20040102
US 6815094	B2	20041109		
CN 1526689	A	20040908	CN 2004-10028332	20040102
CN 1330614	C	20070808		

Abstract
The invention relates to an organic electroluminescent device comprising a blue-emitting diphenylanthracene derivative represented by I [R1 and R2 = H, C1-20 alkyl, C5-20 cycloalkyl, etc.; and Ar1-4 = H, C1-20 alkyl, C5-20 cycloalkyl, etc.].
Hit Structure

CAS Registry Number
736990-14-7 CAPLUS

Chemical or Trade Name
9H-Carbazole-9-carboxylic acid, 3,6-bis[4-(1,1-dimethylethyl)phenyl]-,
1,1-dimethylethyl ester (CA INDEX NAME)



OS.CITING REF COUNT: 0 THERE ARE 0 CAPLUS RECORDS THAT CITE THIS RECORD
(21 CITINGS)

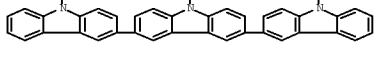
L38 ANSWER 16 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:594276 CAPLUS Full-text
Document Number
141:98272
Title
Electroluminescent device
Author(s)/Inventor
Brunner, Klemens; Van Dijken, Albert; Boerner, Herbert F.; Langeveld, Bea M. W.; Kiggen, Nicole M. M.; Bastiaansen, Jolanda J. A. M.; De Kok-Van Breemen, Margaretha M.
Patent Assignee/Corporate Source
Koninklijke Philips Electronics N.V., Neth.
Source
PCT Int. Appl., 47 pp. CODEN: PIXXD2
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004055129	A1	20040701	WO 2003-IB5782	20031205
AU 2003303047	A1	20040709	AU 2003-303047	20031205
EP 1572832	A1	20050914	EP 2003-813243	20031205
CN 1723257	A	20060118	CN 2003-80105635	20031205
CN 100364981	C	20080130		
JP 2006510231	T	20060323	JP 2005-502473	20031205
US 20060051611	A1	20060309	US 2005-538099	20050608

Abstract
An electroluminescent device comprises a combination of a charge-transporting conjugated donor compound and a phosphorescent acceptor compound, the charge-transporting conjugated donor compound including a conjugated unit comprising a multivalent radical sub-unit having a 1st and a 2nd unsatd. radical site and a shortest chain of unsatd. atoms connecting the 1st and the 2nd radical site. The number of unsatd. atoms in the shortest chain consists of is an odd integer, preferably 1. Such odd-integer sub-units provide the donor compound with lowest-energy triplet levels which are relatively high in energy which in turn enable the EL device, when the donor compound is combined with a suitable acceptor compound, to emit light with high efficiency. Highly efficient green-emitting electroluminescent devices are obtained in this manner.
Hit Structure

CAS Registry Number
628334-90-3 CAPLUS

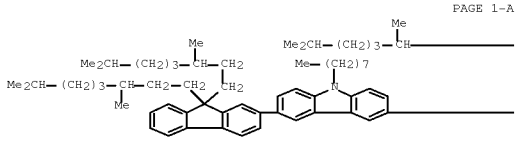
Chemical or Trade Name
3,3':6',3''-Ter-9H-carbazole, 9,9',9''-trioctyl- (9CI) (CA INDEX NAME)



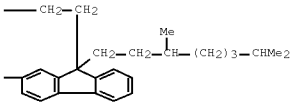
CAS Registry Number
714972-51-7 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis[9,9-bis(7,7-dimethyloctyl)-9H-fluoren-2-yl]-9-octyl-
(CA INDEX NAME)

PAGE 1-A



PAGE 1-B

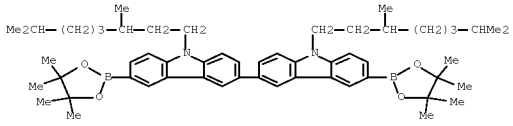


CAS Registry Number
714978-53-9 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 9,9'-bis(3,7-dimethyloctyl)-6,6'-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-, polymer with 3-(3,5-dibromophenyl)-5-phenyl-1,3,4-oxadiazole and 1,3,5-tribromobenzene (9CI) (CA INDEX NAME)

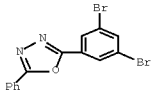
CN
1

CRN 714979-58-8
CMF C56 H70 B2 N2 O4



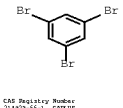
CN
2

CRN 500300-16-3
CMF C14 H8 Br2 N2 O



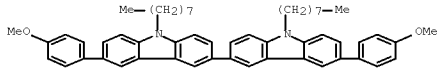
CN
3

CRN 426-39-1
CMF C6 H3 Br3



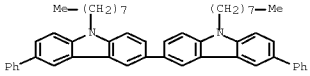
CAS Registry Number
714978-55-1 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 6,6'-bis(4-methoxyphenyl)-9,9'-dioctyl- (CA INDEX NAME)



CAS Registry Number
714979-56-0 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 9,9'-dioctyl-6,6'-diphenyl- (CA INDEX NAME)

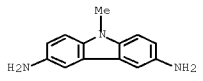


OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (0 CITINGS)

L38 ANSWER 17 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:519756 CAPLUS Full-text
Document Number
141:107068
Title
Molecular hosts for triplet emission in light emitting diodes: a quantum-chemical study
Author(s)
Marsal, P.; Avilov, I.; da Silva Filho, D. A.; Bredas, J. L.; Beljonne, D.
Patent Assignee/Corporate Source
Laboratory for Chemistry of Novel Materials, Center for Research on Service de Chemie des Materiaux, University of Mons-Hainaut, Mons, B-7000, Belg.
Source
Chemical Physics Letters (2004), 392(4-6), 521-526 CODEN: CHPLBC; ISSN: 0009-2614
Document Type
Journal
Language
English
Abstract
Correlated semiempirical and ab initio quantum-chemical methods are applied to the description of the lowest-lying triplet excited state, T1, in conjugated mols. used as hosts in phosphorescent light emitting diodes. D. functional theory leads to the best agreement between measured and calculated excitation energies in a set of reference mols. The trade-off between the barrier for charge injection and the singlet-triplet S0 → T1 energy spacing is discussed in the context of the design of mol. hosts for blue triplet guest emitters.
Hit Structure

CAS Registry Number
46496-17-3 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-methyl- (CA INDEX NAME)



OS.CITING REF COUNT: 34 THERE ARE 34 CAPLUS RECORDS THAT CITE THIS RECORD (34 CITINGS)

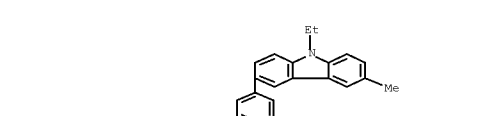
L38 ANSWER 18 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:475163 CAPLUS Full-text
Document Number
141:30081
Title
Organic electroluminescent device and display
Author(s)
Fukuda, Mitsuhiro; Kita, Hiroshi; Yamada, Takehiro
Patent Assignee/Corporate Source
Konica Minolta Holdings, Inc., Japan
Source
U.S. Pat. Appl. Publ., 37 pp. CODEN: USXXCO
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004110031	A1	20040610	US 2003-716360	20031120
US 7270893	B2	20070918		
JP 2004178895	A	20040624	JP 2002-342192	20021126
JP 4707082	B2	20110622		

Abstract
Disclosed is an organic electroluminescent device comprising a component layer including a light emission layer, wherein the light emission layer contains a phosphorescent compound, and the component layer contains a compound represented by A-(Zn)k [A = (un)substituted aromatic ring residue; n = 3-6 integer; and Z = monovalent organic group represented by -L-Cz; (L = chemical bond and divalent linking group; Cz = (un)substituted carbazole residue), provided that A-(Zn) does not have an n-fold axis of symmetry].
Hit Structure

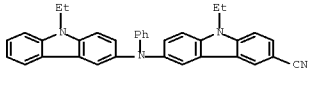
CAS Registry Number
699119-58-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,3',3''-(2,4,6-pyrimidinetriyltri-4,1-phenylene)tris[9-ethyl-6-methyl- (9CI) (CA INDEX NAME)



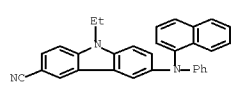
CAS Registry Number
764654-65-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3-carbonitrile, 9-ethyl-6-[(9-ethyl-9H-carbazol-3-yl)phenylamino]- (CA INDEX NAME)



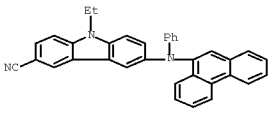
CAS Registry Number
764654-62-8 CAPLUS

Chemical or Trade Name
9H-Carbazole-3-carbonitrile, 9-ethyl-6-(1-naphthalenylphenylamino)- (CA INDEX NAME)



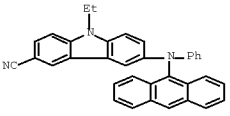
CAS Registry Number
764654-63-9 CAPLUS

Chemical or Trade Name
9H-Carbazole-3-carbonitrile, 9-ethyl-6-(9-phenanthrenylphenylamino)- (CA INDEX NAME)



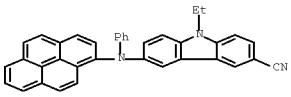
CAS Registry Number
764454-64-0 CAPLUS

Chemical or Trade Name
9H-Carbazole-3-carbonitrile, 6-(9-anthracenylphenylamino)-9-ethyl- (CA INDEX NAME)



CAS Registry Number
764454-66-2 CAPLUS

Chemical or Trade Name
9H-Carbazole-3-carbonitrile, 9-ethyl-6-(phenyl-1-pyrenylamino)- (CA INDEX NAME)

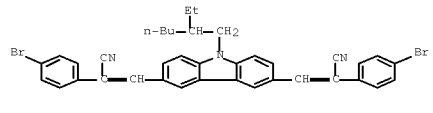


OS.CITING REF COUNT: 83 THERE ARE 83 CAPLUS RECORDS THAT CITE THIS RECORD (83 CITINGS)

L58 ANSWER 20 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:370813 CAPLUS Full-text
Document Number
141:89469
Title
Synthesis and light emitting properties of fluorene-carbazole-based conjugated copolymers
Author(s)
Cho, Nam Sung; Hwang, Do-Hoon; Jung, Byung-Jun; Oh, Jiyoung; Chu, Hye Yong; Shim, Hong-Ku
Patent Assignee(s)/Corporate Source
Center for Advanced Functional Polymers, Department of Chemistry and School of Molecular Science (BK21), Korea Advanced Institute of Science and Technology, Tae-jon, 305-701, S. Korea
Source
Synthetic Metals (2004), 143(3), 277-282 CODEN: SYMEDZ; ISSN: 0379-6779
Document Type
Journal
Language
English
Abstract
A novel series of soluble conjugated copolymers comprised of 9,9-bis(2-ethylhexyl)fluorene and comonomer included carbazole moiety, 3,6-bis[1-(4-bromobenzyl)-cyanovinylene]-9-(2-ethylhexyl)-carbazole (BCEC), were synthesized by nickel-catalyzed Yamamoto coupling reaction. The resulting copolymers exhibit good solubility in common organic solvents such as chloroform, chlorobenzene, etc. and good thermal stability. The copolymers are also easily cast in thin film on glass substrate. By means of the feed ratio, the electronic and optical properties of the polymers were tuned. The UV-Vis spectra of polymers exhibit absorption band at about 382 nm. These polymers showed photoluminescence (PL) maxima at 466 and 470 nm, resp. The electroluminescence (EL) spectrum results were similar to the PL spectra. However, the EL spectra showed the possibility of the white light emission through the electroplex emission around 700 nm from the single polymer device. The EL spectra of the devices were little changed with the various current densities.
Hit Structure

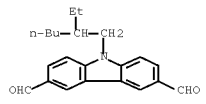
CAS Registry Number
717110-67-3 CAPLUS

Chemical or Trade Name
Benzeneacetonitrile, 4,4'-[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]dimethylidyne]bis[4-bromo- (9CI) (CA INDEX NAME)



CAS Registry Number
169051-20-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)

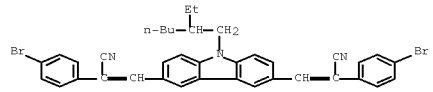


CAS Registry Number
717110-75-3 CAPLUS

Chemical or Trade Name
Benzeneacetonitrile, 4,4'-[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]dimethylidyne]bis[4-bromo-, polymer with 2,7-dibromo-9,9-bis(2-ethylhexyl)-9H-fluorene (9CI) (CA INDEX NAME)

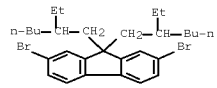
CM
1

CRN 717110-67-3
CMF C38 H33 Br2 N3



CM
2

CRN 169200-93-3
CMF C29 H40 Br2

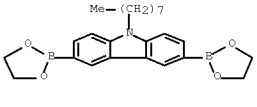


OS.CITING REF COUNT: 22 THERE ARE 22 CAPLUS RECORDS THAT CITE THIS RECORD (22 CITINGS)

L58 ANSWER 21 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:346791 CAPLUS Full-text
Document Number
141:71948
Title
Synthesis and Properties of Random and Alternating Fluorene/Carbazole Copolymers for Use in Blue Light-Emitting Devices
Author(s)
Li, Yuning; Ding, Jianfu; Day, Michael; Tao, Ye; Lu, Jiaoping; D'Iorio, Marie
Patent Assignee(s)/Corporate Source
Institute for Chemical Process and Environmental Technology (ICPET) and Institute for Microstructural Sciences (IMS), National Research Council of Canada (NRC), Ottawa, ON, K1A 0R6, Can.
Source
Chemistry of Materials (2004), 16(11), 2165-2173 CODEN: CMATEX; ISSN: 0897-4756
Document Type
Journal
Language
English
Abstract
Random and alternating fluorene/carbazole (FCz) copolymers with various carbazole contents (20-50 mol %) have been designed and synthesized for use as the hole-transporting as well as light-emitting layer in blue light-emitting diodes (LEDs). DSC anal. has indicated the complete suppression of the crystallizability of these polymers by the introduction of 3,6-carbazole linkages into the polymer backbone, which also results in changes in their optical properties. The absorption maximum has been blue-shifted with an increase in the carbazole content due to the interruption in the main chain conjugation. Meanwhile, the photoluminescent properties have been influenced by the sequence distribution of the fluorene segments as well as the carbazole content. The emission maxima and vibronic features of the alternating copolymers have changed with carbazole content, reflecting the differences in the electronic structures of the repeat units. However, in the case of the random copolymers, the emission spectra remain almost unchanged and are similar to poly(9,9-dioctylfluorene) (PF), despite the fact that the carbazole content increases up to 33 mol %. This feature has been attributed to the existence of longer fluorene segments in the random copolymers, which would be expected to have lower energy gaps, and thus effectively collect excitons from other parts of the polymer backbone. Consequently, the light emitted from these energy traps is similar to that from PF. Electrochem. studies indicate that the introduction of carbazole units effectively raises the HOMO energy levels, thereby facilitating hole injection. Controlling the carbazole content between 20 and 33 mol % results in copolymers with stable and reversible p-doping and n-doping processes. A test for a LED device from P(F3-alt-Cz) indicates that the FCz copolymers could be a good candidate for blue light-emitting and hole-transporting materials.
Hit Structure

CAS Registry Number
685114-69-6 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-di-1,3,2-dioxaborolan-2-yl-9-octyl- (CA INDEX NAME)

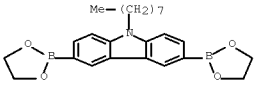


CAS Registry Number
685114-70-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(1,3,2-dioxaborolan-2-yl)-9-octyl-, polymer with 7,7'-dibromo-9,9,9',9'-hexaoctyl-2,2'(7,7'-ter-9H-fluorene (CA INDEX NAME)

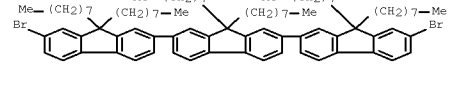
CM
1

CRN 685114-69-6
CMF C24 H31 B2 N O4



CM
2

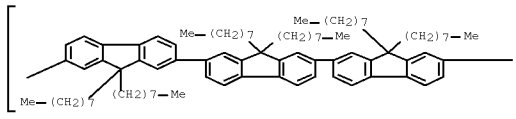
CRN 666871-54-6
CMF C57 H120 Br2



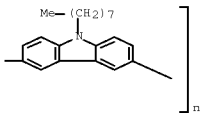
CAS Registry Number
685114-80-1 CAPLUS

Chemical or Trade Name
Poly[(9-octyl-9H-carbazole-3,6-diyl)(9,9,9',9',9'',9''-hexaoctyl[2,2':7',2''-ter-9H-fluorene]-7,7''-diyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

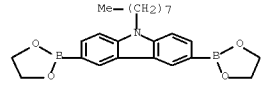


CAS Registry Number
685114-70-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(1,3,2-dioxaborolan-2-yl)-9-octyl-, polymer with 2,7-dibromo-9,9-dioctyl-9H-fluorene (CA INDEX NAME)

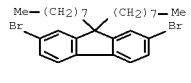
CM
1

CRN 685114-69-6
CMF C24 H31 B2 N O4



CM
2

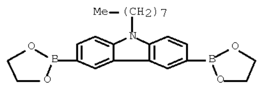
CRN 193964-46-4
CMF C29 H40 Br2



CAS Registry Number
685114-74-3 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(1,3,2-dioxaborolan-2-yl)-9-octyl-, polymer with 7,7'-dibromo-9,9,9',9'-tetraoctyl-2,2'-bi-9H-fluorene (CA INDEX NAME)

CM
1



CM
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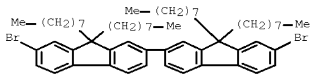
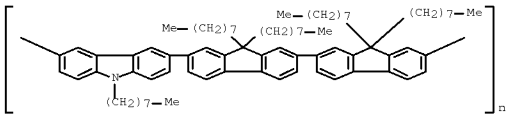
CRN 428865-53-6
CMF C58 H80 Br2



CAS Registry Number
685114-76-5 CAPLUS

Chemical or Trade Name
Poly[(9-octyl-9H-carbazole-3,6-diyl)(9,9,9',9'-tetraoctyl[2,2'-bi-9H-fluorene]-7,7'-diyl)] (9CI) (CA INDEX NAME)

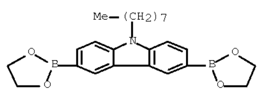


CAS Registry Number
711015-32-6 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(1,3,2-dioxaborolan-2-yl)-9-octyl-,
7,7'''-dibromo-9,9,9',9',9'',9'',9''',9'''-octaoctyl-2,2':7',2'':7'',2'''-quater-9H-fluorene, homopolymer (9CI) (CA INDEX NAME)

CM
1

CRN 685114-69-6
CMF C24 H31 B2 N O4



CM
2

CRN 646474-59-1
CMF C116 H160 Br2

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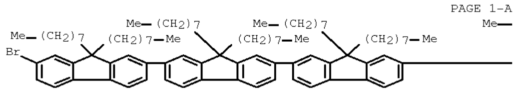
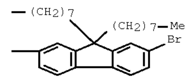


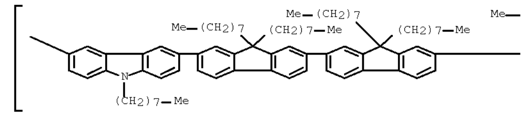
PAGE 1-B



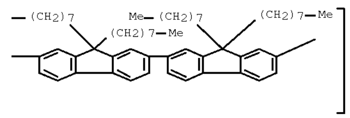
CAS Registry Number
711015-33-7 CAPLUS

Chemical or Trade Name
Poly[(9-octyl-9H-carbazole-3,6-diyl)(9,9,9',9',9'',9'',9''',9'''-octaoctyl[2,2':7',2'':7'',2'''-quater-9H-fluorene]-7,7'''-diyl)] (9CI)
(CA INDEX NAME)

PAGE 1-A



PAGE 1-B

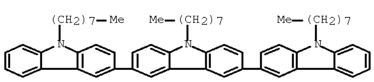


OS.CITING REF COUNT: 157 THERE ARE 157 CAPLUS RECORDS THAT CITE THIS RECORD (158 CITINGS)

L38 ANSWER 22 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:340629 CAPLUS Full-text
Document Number
141:147745
Title
Carbazole compounds as host materials for triplet emitters in organic light-emitting diodes: tuning the HOMO level without influencing the triplet energy in small molecules
Author/Inventor
Brunner, Klemens; Van Dijken, Addy; Boerner, Herbert; Bastiaansen, Jolanda J. A. M.; Kiggen, Nicole M. M.; Langeveld, Bea M. W.
Patent Assignee/Corporate Source
Philips Research, Eindhoven, 5656 AA, Neth.
Source
Journal of the American Chemical Society (2004), 126(19), 6035-6042 CODEN: JACSAT; ISSN: 0002-7863
Document Type
Journal
Language
English
Abstract
Novel carbazole compds. were synthesized and tested for their suitability as host for triplet emitters in an organic-light emitting diode (OLED). In these compds., a carbazole unit is either connected to other carbazole units to form carbazole dimers and trimers or to fluorene and oxadiazole derivs. to form mixed compds. The HOMO level of carbazole compds. can be tuned by substitution at the 3, 6, and/or 9 positions. Making oligomers by connecting carbazole mols. via their 3 (3') positions shifts the HOMO level to higher energy, while replacing alkyl groups at the 9 (9') positions by aryl groups shifts the HOMO level to lower energy. Also, the triplet energy of these compds. is determined by the presence of poly(p-phenyl) chains in the mol. structure. By identifying the longest poly(p-phenyl) chain, one can predict whether a compound will be a suitable host for a high-energy triplet emitter. An overview of HOMO levels, singlet and triplet levels, and exchange energies is given for all carbazole compds. synthesized. Finally, OLEDs employing two selected carbazole compds. as host and fac-tris(2-phenylpyridine)-Ir (Ir(ppy)3) as guest were constructed and characterized elec.
Hit Structure

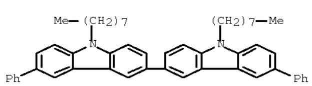
CAS Registry Number
628336-90-3 CAPLUS

Chemical or Trade Name
3,3':6',3''-Ter-9H-carbazole, 9,9',9''-trioctyl- (9CI) (CA INDEX NAME)



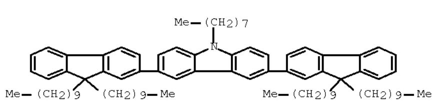
CAS Registry Number
714972-56-2 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 9,9'-dioctyl-6,6'-diphenyl- (CA INDEX NAME)



CAS Registry Number
726169-81-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(9,9-didecyl-9H-fluoren-2-yl)-9-octyl- (CA INDEX NAME)



CAS Registry Number
726169-84-2 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 6,6'-bis(9,9-didecyl-9H-fluoren-2-yl)-9,9'-dioctyl-
(CA INDEX NAME)

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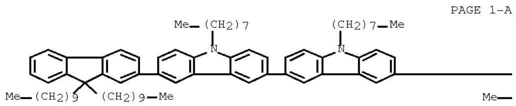
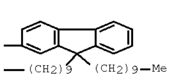


PAGE 1-B



OS.CITING REF COUNT: 263 THERE ARE 263 CAPLUS RECORDS THAT CITE THIS RECORD (266 CITINGS)

L38 ANSWER 23 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:283035 CAPLUS Full-text
Document Number
141:30663
Title
Optical properties and microring laser of conducting polymers with Sn atoms in main chains
Author/Inventor
Yoshida, Y.; Nishihara, Y.; Fujii, A.; Ozaki, M.; Yoshino, K.; Kim, H. K.; Baek, N. S.; Choi, S. K.
Patent Assignee/Corporate Source
Graduate School of Engineering, Department of Electronic Engineering, Osaka University, 2-1 Yamada-oka, Suita, Osaka, 565-0871, Japan
Source
Journal of Applied Physics (2004), 95(8), 4193-4196 CODEN: JAPIAU; ISSN: 0021-8979
Document Type
Journal
Language
English
Abstract
Optical properties of conducting polymers with Sn atoms in main chains, such as optical absorption, luminescence (PL), and electroluminescence, were studied. The electronic energy structures were determined by optical and electrochem. measurements. Strong PL with high quantum efficiency was clarified in the films, and photopumped multimode laser emission was demonstrated from cylindrical microcavities formed by these polymers coated around optical fibers.
Hit Structure

CAS Registry Number
434952-98-4 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(diphenylstannylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

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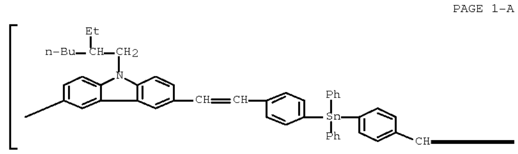
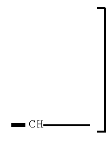


PAGE 1-B



OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

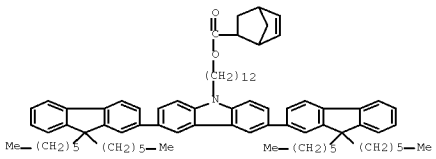
L38 ANSWER 24 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:245888 CAPLUS Full-text
Document Number
140:391564
Title
Blue light emission from a fluorene-carbazole-fluorene trimer incorporated as the side chain into a polynorbornene
Author/Inventor
Zaami, Norredine; Slugovc, Christian; Pogantsch, Alexander; Stelzer, Franz
Patent Assignee/Corporate Source
Institute for Chemistry and Technology of Organic Materials (ICTOS), Graz University of Technology, Graz, 8010, Austria
Source
Macromolecular Chemistry and Physics (2004), 205(4), 523-529 CODEN: MCHPES; ISSN: 1022-1352
Document Type
Journal
Language
English
Abstract
A well defined blue electroluminescent fluorene-carbazol-fluorene trimer 3,6-bis-(9,9-dihexyl-9H-fluoren-3-yl)-9- alkyl-9H-carbazole was synthesized using a Suzuki type cross coupling reaction as the key step. A way to attach this chromophore to a norbornene was developed and the resulting electroactive monomer was polymerized using the "3rd generation Grubbs catalyst" (N,N-bis(mesityl 4,5-dihydroimidazol-2-ylidene)(3-bromo-pyridine)2(Cl)2Ru=CHPh), yielding an amorphous polymer with a narrow mol. weight distribution, which was used to build a light-emitting diode exhibiting electroluminescence peaking at 410 nm.
Hit Structure

CAS Registry Number
668027-16-9 CAPLUS

Chemical or Trade Name
Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid,
12-[3,6-bis(9,9-dihexyl-9H-fluoren-2-yl)-9H-carbazol-9-yl]dodecyl ester,
homopolymer (9CI) (CA INDEX NAME)

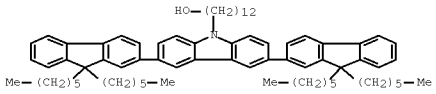
CN
1

CDN 668027-16-1
CMF C69 H105 N O2



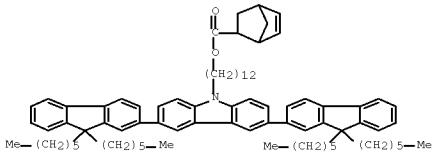
CAS Registry Number
668027-17-0 CAPLUS

Chemical or Trade Name
9H-Carbazole-9-dodecanol, 3,6-bis(9,9-dihexyl-9H-fluoren-2-yl)- (CA INDEX
NAME)



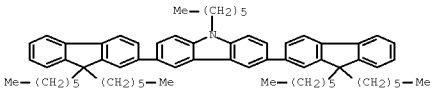
CAS Registry Number
668027-18-1 CAPLUS

Chemical or Trade Name
Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid,
12-[3,6-bis(9,9-dihexyl-9H-fluoren-2-yl)-9H-carbazol-9-yl]dodecyl ester
(CA INDEX NAME)



CAS Registry Number
668027-20-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(9,9-dihexyl-9H-fluoren-2-yl)-9-hexyl- (CA INDEX
NAME)



OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)

L38 ANSWER 25 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:216365 CAPLUS Full-text
Document Number
140:278197
Title
Organic electroluminescent device
Author(s)/Inventor
Ishii, Toru; Okuda, Daisuke; Seki, Mieko; Yoneyama, Hiroto; Hirose, Eiichi; Ozaki, Tadayoshi; Agata, Takashi; Mashimo, Kiyokazu; Sato, Katsuhiro
Patent Assignee/Corporate Source
Fuji Photo Co., Ltd., Japan
Source
Jpn. Kokai Tokkyo Koho, 83 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004087371	A	20040318	JP 2002-246675	20020826
JP 4239523	B2	20090318		

Abstract
The invention relates to an organic electroluminescent device comprising the charge transporting polyester containing the partial structure represented by I and II (X = divalent aromatic group; T = C1-6 divalent linear chain hydrocarbon and C2-10 divalent branched hydrocarbon groups; R1 = C1-10 hydrocarbon and aromatic groups; R2 = H, C1-10 hydrocarbon, C1-4 alkoxy, cyano, etc.; and i, j and k = 0 or 1).
Hit Structure

CAS Registry Number
672921-75-4 CAPLUS

Chemical or Trade Name
Benzenepropanoic acid, 4,4'-[(1,1':4',1''-terphenyl)-4,4''-diylbis[(9,9-
dimethyl-9H-carbazol-3-yl)imino]bis-, polymer with 1,2-ethanediol (9CI)
(CA INDEX NAME)

CN
1

CDN 672921-74-3
CMF C64 H54 N4 O4

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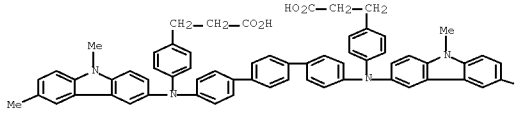

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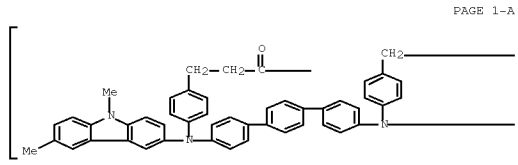
CN
2

CDN 107-21-1
CMF C2 H6 O2

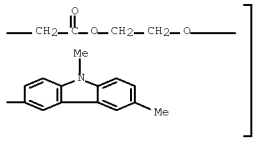
CAS Registry Number
672921-76-5 CAPLUS

Chemical or Trade Name
Poly[oxy-1,2-ethanediyloxy(1-oxo-1,3-propanediyl)-1,4-phenylene[(9,9-
dimethyl-9H-carbazol-3-yl)imino][1,1':4',1''-terphenyl]-4,4''-diyl[(9,9-
dimethyl-9H-carbazol-3-yl)imino]-1,4-phenylene(3-oxo-1,3-propanediyl)]
(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



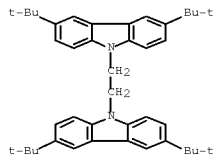
L38 ANSWER 26 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:209869 CAPLUS Full-text
Document Number
140:261489
Title
Organic electroluminescent device and display apparatus showing improved brightness, light-efficiency, and durability
Author(s)/Inventor
Matsuura, Mitsunobu; Kinoshita, Motoki; Yamada, Takefoshi; Kita, Hiroshi
Patent Assignee/Corporate Source
Konica Minolta Holdings Inc., Japan
Source
Jpn. Kokai Tokkyo Koho, 43 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004079265	A	20040311	JP 2002-235613	20020813
JP 4103493	B2	20080618		

Abstract
The title organic electroluminescent display device contains a 250-2000 mol. weight carbazole derivative(s) represented by I (R1-6 = H, alkyl, aryl, alkyloxy, aryloxy, alkylthio, arylthio, amino, alkylamino, arylamino, heterocyclyl, silyl; R9 = alkyl) as a host compound. The organic electroluminescent display device contains a phosphor compound dopant selected from Ir compound, Os compound, and Pt compound, preferably Ir compound.
Hit Structure

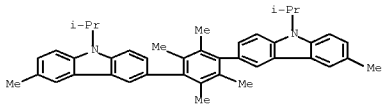
CAS Registry Number
669072-71-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9,9'-(1,2-ethanediyl)bis[3,6-bis(1,1-dimethylethyl)- (CA
INDEX NAME)



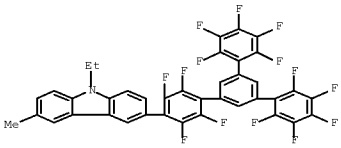
CAS Registry Number
669072-36-0 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,3'-(2,2,5,6-tetramethyl-1,4-phenylene)bis[6-methyl-9-(1-methylethyl)- (CA INDEX NAME)



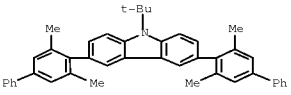
CAS Registry Number
669072-60-0 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-ethyl-3-methyl-6-[3,2'':3,3''':4'',5,5'':6,6''-nonafluoro-5''-(pentafluorophenyl)[1,1':3',1''-terphenyl]-4-yl]- (9CI) (CA INDEX NAME)



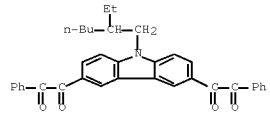
CAS Registry Number
669072-43-3 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(3,5-dimethyl[1,1'-biphenyl]-4-yl)-9-(1,1-dimethylethyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L38 ANSWER 26 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:176226 CAPLUS Exfact
Document Number
140:375793
Title
Pure Deep Blue Light-Emitting Diodes from Alternating Fluorene/Carbazole Copolymers by Using Suitable Hole-Blocking Materials
Author(s)
Liu, Xiaoping; Tao, Ye; D'Iorio, Marie; Li, Yuning; Ding, Jianfu; Day, Michael
Patent Assignee/Corporate Source
Institute for Microstructural Sciences and Institute for Chemical Process and Environmental Technology, National Research Council of Canada, Ottawa, ON, K1A 0R6, Can.
Source
Macromolecules (2004), 37(7), 2442-2449 CODEN: MAMOBX; ISSN: 0024-9297
Document Type
Journal
Language
English
Abstract
The influences of the carbazole content on the photophys., electrochem., and electroluminescent properties of alternating fluorene/carbazole copolymers (PFnCz) (n = 1, 2, 3) with well-defined chemical structures were systematically studied. The incorporation of carbazole units into the polyfluorene (PF) backbone resulted in a blue shift of both the absorption and photoluminescence (PL) emission peaks, improved PL thermal stability, raised HOMO energy levels, and thus facilitated hole injection into the copolymers. Pure deep blue electroluminescence (EL) with narrow fwhms (full width at the half-maximum) (26-52 nm) and negligible low-energy emission bands was successfully achieved from the PFnCz copolymers by using 1,3,5-tris[4-fluoro(phenyl)-4-yl]benzene (F-TBB) as a hole-blocking layer and Alq3 as an electron injection/transporting layer. This device configuration stabilized the blue emission from the PF derivs. An efficiency of 0.72 cd/A at a luminance of 100 cd/m2 was obtained even with aluminum metal as the cathode. Voltage-luminance and voltage-efficiency curves of PFnCz in a ITO/PPnCz/F-TBB/Alq3/LiF/Al device is given.
Hit Structure



CAS Registry Number
685114-70-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(1,3,2-dioxaborolan-2-yl)-9-octyl-, polymer with 2,7-dibromo-9,9-dioctyl-9H-fluorene (CA INDEX NAME)

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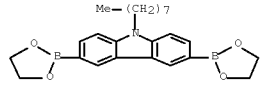
CRN 685114-69-6
CMF C24 H31 B2 N O4



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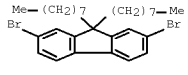

CAS Registry Number
685114-74-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(1,3,2-dioxaborolan-2-yl)-9-octyl-, polymer with 2,7'-dibromo-9,9,9',9'-tetraoctyl-2,2'-bi-9H-fluorene (CA INDEX NAME)

CM
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CRN 685114-69-6
CMF C24 H31 B2 N O4

L38 ANSWER 27 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:181569 CAPLUS Exfact
Document Number
140:424030
Title
Synthesis and Light-Emitting Properties of a New Conjugated Polymer Containing Carbazole and Quinoxaline Moieties
Author(s)
Hamuryudan, A.; Dehaen, W.; Peng, Han; Xie, Zhiliang; Tang, Ben Zhong
Patent Assignee/Corporate Source
Laboratory of Organic Synthesis, Department of Chemistry, Louvain, Belg.
Source
Journal of Macromolecular Science, Pure and Applied Chemistry (2004), A41(3), 295-303 CODEN: JSPCBE; ISSN: 1060-1325
Document Type
Journal
Language
English
Abstract
A conjugated polymer consisting of carbazole and quinoxaline units is synthesized in a high isolation yield (95%). The polymer possesses a high mol. weight (approx.22 kDa) and is completely soluble in common solvents. When the polymer is used as an emitting layer in a multilayer electroluminescence (EL) device, it emits a blue light of 464 nm and exhibits a current efficiency of approx.0.7 cd/A.
Hit Structure

CAS Registry Number
693228-04-5 CAPLUS

Chemical or Trade Name
Ethanedione, 1,1'-[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]bis[2-phenyl-, polymer with [1,1'-biphenyl]-3,3',4,4'-tetramine (9CI) (CA INDEX NAME)

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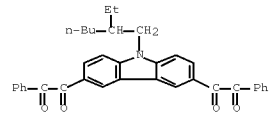
CRN 693228-03-4
CMF C36 H33 N O4



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CRN 91-95-2
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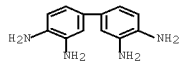
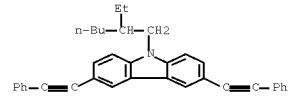


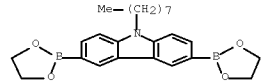
CAS Registry Number
693228-02-3 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(2-phenylethynyl)- (CA INDEX NAME)



CAS Registry Number
693228-03-4 CAPLUS

Chemical or Trade Name
Ethanedione, 1,1'-[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]bis[2-phenyl- (9CI) (CA INDEX NAME)



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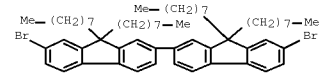
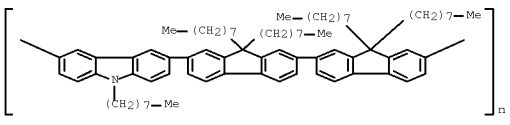
CRN 420065-53-6
CMF C58 B80 Br2



CAS Registry Number
685114-76-5 CAPLUS

Chemical or Trade Name
Poly[9-octyl-3H-carbazole-3,6-diyl(9,9,9',9'-tetraoctyl[2,2'-bi-9H-fluorene]-7,7'-diyl)] (9CI) (CA INDEX NAME)



CAS Registry Number
685114-73-2 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(1,3,2-dioxaborolan-2-yl)-9-octyl-, polymer with 2,7''-dibromo-9,9,9',9',9'',9''-hexaoctyl-2,2':7',2''-ter-9H-fluorene (CA INDEX NAME)

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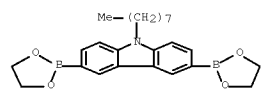
CRN 685114-69-6
CMF C24 H31 B2 N O4



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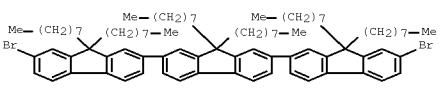
CRN 646474-54-6
CMF C87 H130 Br2

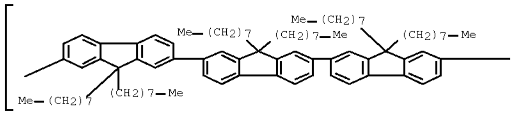


CAS Registry Number

685114-80-1 CAPLUS

Chemical or Trade Name
Poly[(9-octyl-9H-carbazole-3,6-diyl)(9,9,9',9',9'',9''-hexaoctyl[2,2':7',2''-ter-9H-fluorene]-7,7''-diyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



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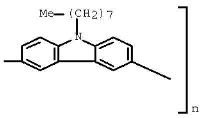


OS.CITING REF COUNT: 82 THERE ARE 82 CAPLUS RECORDS THAT CITE THIS RECORD (83 CITINGS)

L38 ANSWER 29 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2004:174889 CAPLUS Full-text

Document Number
142:29538

Title
Host materials for triplet emitters

Author/Inventor
Anon.

Patent Assignee/Corporate Source
Neth.

Source
IP.com Journal (2003), 4(1), 26 (No. IPCOM000021063D), 19 Dec 2003 CODEN: IJPOBX; ISSN: 1533-0001

Document Type
Journal; Patent

Language
English

Patent Information

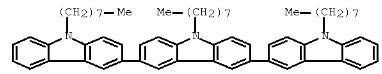
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	IP 21063D	20031219	IP 2003-21063D	20031219

Abstract
Carbazole compds. are described by the general formula I (n ≥ 2) in which each carbazole unit may be (un)substituted with ≥1 substituents. The carbazole compds. may be combined with light- emitting compds. (e.g., triplet emitter compds.) capable of accepting energy from the carbazole compds. Electroluminescent devices employing the compds. or the light-emitting compound-carbazole compound combinations are also described.

Hit Structure

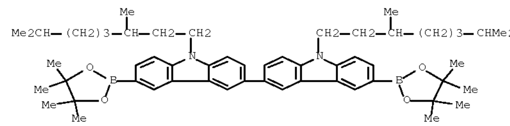
CAS Registry Number
628336-90-3 CAPLUS

Chemical or Trade Name
3,3':6',3''-Ter-9H-carbazole, 9,9',9''-trioctyl- (9CI) (CA INDEX NAME)



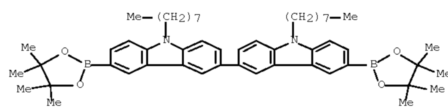
CAS Registry Number
714972-52-8 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 9,9'-bis(3,7-dimethyloctyl)-6,6'-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (CA INDEX NAME)



CAS Registry Number
746651-55-8 CAPLUS

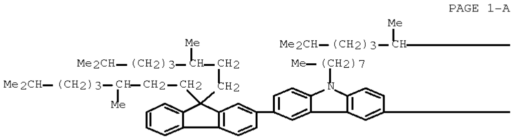
Chemical or Trade Name
3,3'-Bi-9H-carbazole, 9,9'-dioctyl-6,6'-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (CA INDEX NAME)



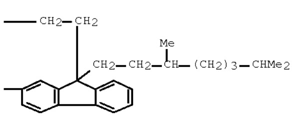
CAS Registry Number
714972-51-7 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis[9,9-bis(3,7-dimethyloctyl)-9H-fluoren-2-yl]-9-octyl- (CA INDEX NAME)

PAGE 1-A



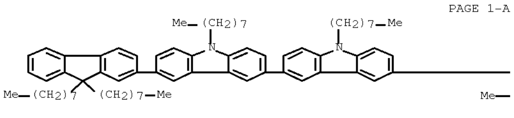
PAGE 1-B



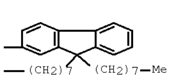
CAS Registry Number
746651-60-5 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 6,6'-bis(9,9-dioctyl-9H-fluoren-2-yl)-9,9'-dioctyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L38 ANSWER 30 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2004:173859 CAPLUS Full-text

Document Number
141:357637

Title
Electroluminescent device

Author/Inventor
Anon.

Patent Assignee/Corporate Source
USA

Source
IP.com Journal (2003), 4(1), 24 (No. IPCOM000021047D), 18 Dec 2003 CODEN: IJPOBX; ISSN: 1533-0001

Document Type
Journal; Patent

Language
English

Patent Information

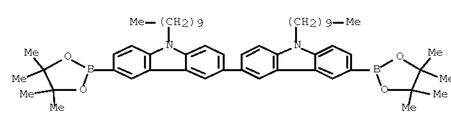
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	IP 21047D	20031218	IP 2003-21047D	20031218

Abstract
The invention relates to an electroluminescent device comprising a combination of a charge-transporting conjugated donor compound and a phosphorescent acceptor compound The invention further relates to the use of a charge-transporting conjugated donor compound in such a combination. The synthesis of donor compound I (R = p-methoxyphenyl) is described in a related application 1022660. On an ITO-covered glass substrate, a layer stack HTL/LEL/HBL/ETL/EIE is deposited by means of vacuum deposition having the following composition: 30.1 nm α-NPD/30 nm (91.7 %wt I (R= p-methoxyphenyl), 8.3 %wt Ir(ppy)3)/ 10 nm bathocuproin/ 40 nm Alq3/ 1.5 nm Li-benzoate/ 70 nm Al wherein α-NPD is N,N'-di(naphthalen-1-yl)- N,N'-diphenyl-benzidine and bathocuproin is 2,9-dimethyl-4,7-diphenyl- 1,10-phenanthroline. Alq3 is aluminum trisoxine. The carbazole donor compound I (R= p-methoxyphenyl) is evaporated at 240°C. The device emits green light characteristic of the phosphorescent acceptor compound Ir(ppy)3. The external efficiency of the device is about 30 to 35 cd/A. Although not necessarily wishing to be bound by any theory, it is believed that such efficiencies can only be obtained if triplet excitons on the carbazole donor compound are efficiently transferred to the phosphorescent acceptor compound and/or triplet excitons on 25 the triplet emitter are effectively prevented from being transferred to the carbazole donor compound Such efficient transfer and/or effective prevention of back-transfer requires the lowest-energy triplet level of the carbazole donor compound to be located above the emitter level of the phosphorescent acceptor compound The triplet level of the carbazole I (R= p-methoxyphenyl) is about 22,200 cm-1 and of the donor compound II (R= p=methoxyphenyl) . The emitter level 30 of Ir(ppy)3 is about 18,000 cm-1.

Hit Structure

CAS Registry Number
775354-97-7 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 9,9'-didecyl-6,6'-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (CA INDEX NAME)



CAS Registry Number
775355-01-6 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 9,9'-didecyl-6,6'-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-, polymer with 2-(3,5-dibromophenyl)-5-phenyl-1,3,4-oxadiazole and 1,3,5-tribromobenzene (9CI) (CA INDEX NAME)

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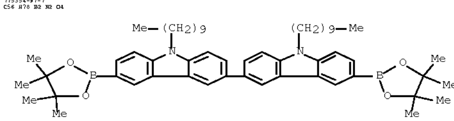

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CRN 500300-16-3
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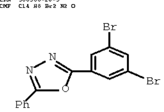

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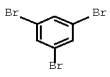
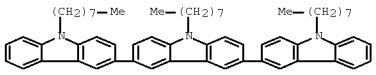
CRN 626-39-1
CMF C6 H3 Br3



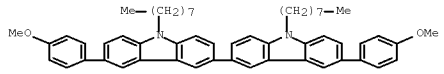
CAS Registry Number
630336-90-3 CAPLUS

Chemical or Trade Name
3,3':6',3''-Ter-9H-carbazole, 9,9',9''-trioctyl- (9CI) (CA INDEX NAME)



CAS Registry Number
714972-55-1 CAPLUS

Chemical or Trade Name
3,3'-Bi-9H-carbazole, 6,6'-bis(4-methoxyphenyl)-9,9'-dioctyl- (CA INDEX NAME)



CAS Registry Number
714972-56-2 CAPLUS

Chemical or Trade Name
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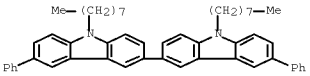
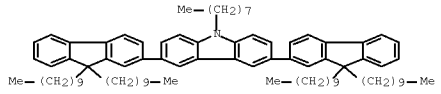
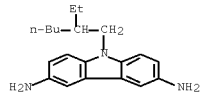


CAS Registry Number
726169-91-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(9,9-didecyl-9H-fluoren-2-yl)-9-octyl- (CA INDEX NAME)



L38 ANSWER 31 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:002181 CAPLUS Full-text
Document Number
140:287813
Title
Synthesis and characterization of new, soluble polyazomethines bearing fluorene and carbazole units in the backbone and solubility-improving moieties in the side group
Author(s)
Kim, Hyun-Chul; Kim, Jong-Seong; Kim, Kie-Soo; Park, Hong-Ki; Baek, Sungsik; Ree, Moonhor
Patent Assignee/Corporate Source



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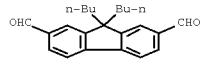
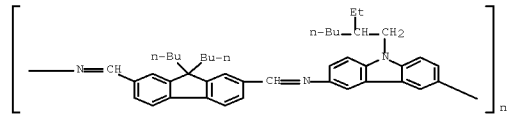
CRN 427782-36-8
CMF C33 H26 O2



CAS Registry Number
675603-96-4 CAPLUS

Chemical or Trade Name
Poly[(9-(3-ethylhexyl)-9H-carbazole-3,6-diyl)nitrilomethylidyne(9,9-dibutyl-9H-fluorene-2,7-diyl)methylidynenitrilo] (9CI) (CA INDEX NAME)



CAS Registry Number
675603-91-5 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(3-ethylhexyl)-, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-diamine (9CI) (CA INDEX NAME)

CN
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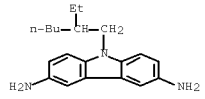
CRN 675603-82-4
CMF C20 H27 N3



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CRN 169051-20-1
CMF C33 H25 N O2

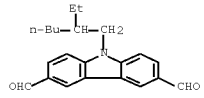
School of Environmental Science and Engineering, Department of Chemistry, Center for Integrated Molecular Systems, BK21 Program, Division of Molecular and Life Sciences and Polymer Research Institute, Pohang University of Science and Technology, Pohang, 790-784, S. Korea
Source
Journal of Polymer Science, Part A: Polymer Chemistry (2004), 42(4), 825-834 CODEN: JPACEC; ISSN: 0887-624X
Document Type
Journal
Language
English
Abstract
A series of novel, soluble polyazomethines bearing fluorene and carbazole moieties in the main chain and solubility-improving moieties in the side group (di-Bu, ethylhexyl, thienylethyloxy, furyl, and fluorenyl) were synthesized. Good-quality films of these polymers were prepared through the conventional solution-casting and drying processes. Depending on the polymer structure, some polymers showed a glass-transition temperature (127-167°) and others showed a melting temperature (285-341°). The temperature of 5% weight loss under nitrogen atmospheric of the polymers ranged from 370 to 464°. The results indicated that the side groups incorporated into the polyazomethine structure in this work improved the polymer solubility without sacrificing thermal stability. Depending on the polymer structure, some of the polymers were crystalline whereas others were amorphous. All the polyazomethines were solution-processable and thermally stable, making them potential candidate materials for applications in microelectronics and aerospace. Moreover, the features in the UV-visible spectra of the polyazomethines were red shifted as compared with those of the monomers, from which the polymers were synthesized, indicating that these polymers, if combined with an appropriate doping agent to improve the light-emitting and conducting abilities, may be good candidate materials for optoelectronic devices.
RE.Structure

CAS Registry Number
675603-87-9 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)-, polymer with 9H-carbazole-3,6-diamine (9CI) (CA INDEX NAME)

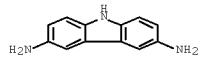
CN
1

CRN 169051-20-1
CMF C33 H25 N O2



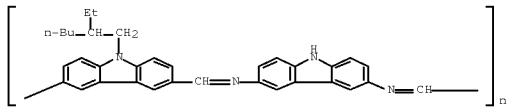
CN
3

CRN 86-71-5
CMF C12 H11 N3



CAS Registry Number
675603-88-0 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)methylidynenitrilo-9H-carbazole-3,6-diylnitrilomethylidyne] (9CI) (CA INDEX NAME)

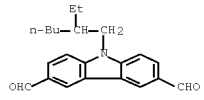


CAS Registry Number
675603-89-1 CAPLUS

Chemical or Trade Name
9H-Fluorene-2,7-dicarboxaldehyde, 9,9-dibutyl-, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-diamine (9CI) (CA INDEX NAME)

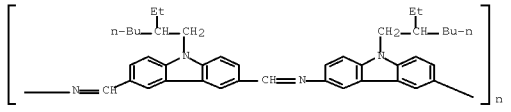
CN
1

CRN 675603-82-4
CMF C20 H27 N3



CAS Registry Number
675603-92-6 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)nitrilomethylidyne(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)methylidynenitrilo] (9CI) (CA INDEX NAME)

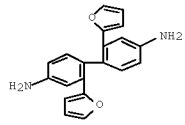


CAS Registry Number
675603-97-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)-, polymer with 3,3'-di-2-furanyl[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)

CN
1

CRN 190193-17-0
CMF C20 H16 N2 O2



CN
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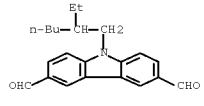
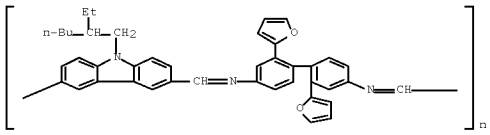
CRN 169051-20-1
CMF C33 H25 N O2



CAS Registry Number
675603-99-3 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)methylidynenitrilo(3,3'-di-2-furanyl[1,1'-biphenyl]-4,4'-diyl)nitrilomethylidyne] (9CI) (CA INDEX NAME)

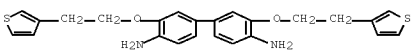


CAS Registry Number
675604-04-3 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)-, polymer with
3,3'-bis[3-(3-thienylmethoxy)[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX
NAME)

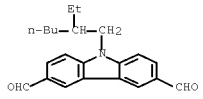
CM
1

CRN 675603-84-6
CMF C24 H24 N2 O2 S2



CM
2

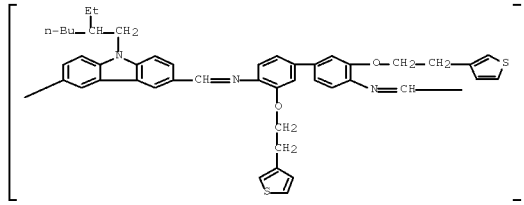
CRN 169051-20-1
CMF C22 H25 N O2



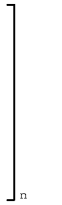
CAS Registry Number
675604-05-4 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]methylidynenitrilo[3,3'-bis[3-
(3-thienylmethoxy)[1,1'-biphenyl]-4,4'-diyl]nitrilomethylidyne] (9CI) (CA
INDEX NAME)

PAGE 1-A



PAGE 1-B

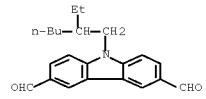


CAS Registry Number
675604-06-5 CAPLUS

Chemical or Trade Name
Poly(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)
4,4'-(9H-fluoren-9-ylidene)bis[benzenamine] (9CI) (CA INDEX NAME)

CM
1

CRN 169051-20-1
CMF C22 H25 N O2



CM
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CRN 15499-84-0
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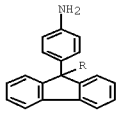
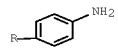
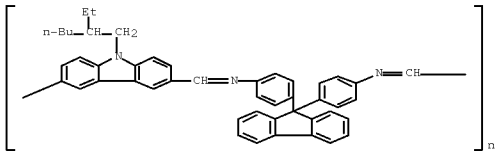




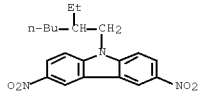
CAS Registry Number
675604-09-8 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]methylidynenitrilo-1,4-
phenylene-9H-fluoren-9-ylidene-1,4-phenylenenitrilomethylidyne] (9CI) (CA
INDEX NAME)



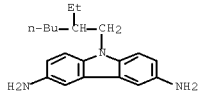
CAS Registry Number
675603-81-3 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-dinitro- (CA INDEX NAME)



CAS Registry Number
675603-82-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-(2-ethylhexyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 23 THERE ARE 23 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)

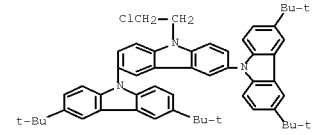
L38 ANSWER 32 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2004:57556 CAPLUS Full-text
Document Number
140:10606
Title
Carbazole compounds, their polymers, and light-emitting elements using them with excellent blue light emission
Author(s)
Watanabe, Satsuke; Okada, Hitoshi
Patent Assignee(s)/Corporate Source
Fuji Photo Film Co., Ltd., Japan
Source
Jpn. Kokai Tokkyo Koho, 27 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004010707	A	20040122	JP 2002-178094	20020619

Abstract
The compds. are 3-R1-6-R2-9-R3-substituted carbazole [R1,2 = (un)substituted 9-carbazolyl; R3 = H2C:CRX; R = H, substituent; X = single bond, divalent organic group].
Hit Structure

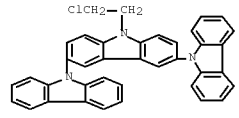
CAS Registry Number
1334491-19-9 CAPLUS

Chemical or Trade Name
INDEX NAME NOT YET ASSIGNED



CAS Registry Number
644979-46-4 CAPLUS

Chemical or Trade Name
9,3':6',9''-Ter-9H-carbazole, 9''-(2-chloroethyl)- (9CI) (CA INDEX NAME)

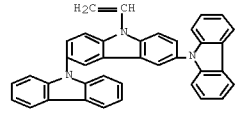


CAS Registry Number
644979-50-0 CAPLUS

Chemical or Trade Name
9,3':6',9''-Ter-9H-carbazole, 9''-ethenyl-, homopolymer (9CI) (CA INDEX
NAME)

CM
1

CRN 644979-48-6
CMF C30 H21 N3

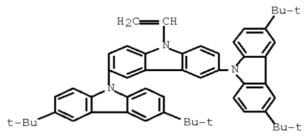


CAS Registry Number
644979-40-2 CAPLUS

Chemical or Trade Name
9,3':6',9''-Ter-9H-carbazole, 3,3'',6,6''-tetrakis(1,1-dimethylethyl)-9''-
ethenyl-, homopolymer (9CI) (CA INDEX NAME)

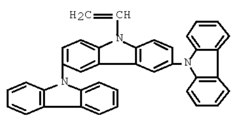
CM
1

CRN 644979-55-5
CMF C54 H57 N3



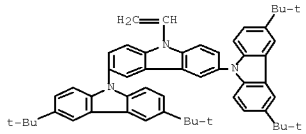
CAS Registry Number
644979-48-6 CAPLUS

Chemical or Trade Name
9,3':6',9''-Ter-9H-carbazole, 9'-ethenyl- (9CI) (CA INDEX NAME)



CAS Registry Number
644979-55-5 CAPLUS

Chemical or Trade Name
9,3':6',9''-Ter-9H-carbazole, 3,3'',6,6''-tetrakis(1,1-dimethylethyl)-9'-ethenyl- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 33 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2004:54760 CAPLUS Full-text

Document Number
140:254187

Title
Optical and electroluminescent properties of novel poly(aryl ether)s with isolated carbazole and p-quaterphenyl fluorophores

Author/Inventor
Chen, Yun; Hwang, Shiao-Wen; Chen, Shinn-Horng

Patent Assignee/Corporate Source
Department of Chemical Engineering, National Cheng Kung University, Tainan, Taiwan

Source
Journal of Polymer Science, Part B: Polymer Physics (2004), 42(2), 333-340 CODEN: JPBPEM; ISSN: 0887-6266

Document Type
Journal

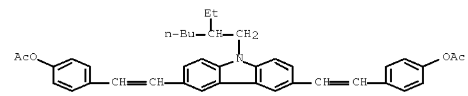
Language
English

Abstract
We report the optical and electroluminescent properties of four novel poly(aryl ether)s (P1-P4) consisting of alternate isolated hole-transporting [carbazole or 3,6-bis(styryl)carbazole] and electron-transporting [dicyano-p-quaterphenyl or bis(trifluoromethyl)-p-quaterphenyl] fluorophores. The photoluminescence (PL) spectra of the four polymeric films show maximum peaks around 407-413 nm for P1, P2 and 442-447 nm for P3, P4. The PL spectra of P1.apprx.P4 are dependent on the composition of the two isolated fluorophores. According to the observation of relative quantum yield in poor solvent (cyclohexane), P2 containing more bulky trifluoromethyl groups in p-quaterphenyl segments prevented aggregate quenching processes more than P1. Compared with P1 and P2 with carbazole segments, P3 and P4 with 3,6-bis(styryl)carbazole segments exhibited less interchain interaction and a low threshold elec. field in a single-layer device. The p-quaterphenyl and carbazole [or 3,6-bis(styryl)carbazole] segments were regarded as electron-transporting and hole-transporting units, resp., in the single-layer light-emitting diodes (Al/P1-P4/ITO). In the double-layer device (ITO/MEH-PPV/P2/Al), the maximum luminance was doubled, and the threshold elec. fields diminished because P2 functioned as an electron-transporting and hole-blocking layer. Furthermore, the voltage-tunable multicolor emission from orange to green was observed

Hit Structure

CAS Registry Number
444015-02-5 CAPLUS

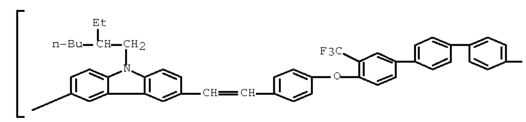
Chemical or Trade Name
Phenol, 4,4'-[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]di-2,1-ethenediyl]bis-, 1,1'-diacetate (CA INDEX NAME)



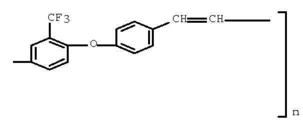
CAS Registry Number
458556-58-6 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenyleneoxy[3,3'''-bis(trifluoromethyl)[1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diyl]oxy-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CAS Registry Number
458556-57-5 CAPLUS

Chemical or Trade Name

Phenol, 4,4'-[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]di-2,1-ethenediyl]bis-, polymer with 4,4'''-difluoro-3,3'''-bis(trifluoromethyl)-1,1':4',1'':4'',1'''-quaterphenyl (9CI) (CA INDEX NAME)

CM
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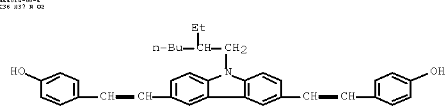
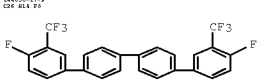
CRN 444014-88-4
CMF C36 H37 N O2



CM
2

CRN 244030-17-9
CMF C26 H14 F8

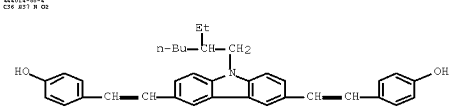


CAS Registry Number
458556-59-7 CAPLUS

Chemical or Trade Name
[1,1':4',1'':4'',1'''-Quaterphenyl]-3,3'''-dicarbonitrile, 4,4'''-difluoro-, polymer with 4,4'-[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]di-2,1-ethenediyl]bis[phenol] (9CI) (CA INDEX NAME)

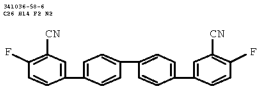
CM
1

CRN 444014-88-4
CMF C36 H37 N O2



CM
2

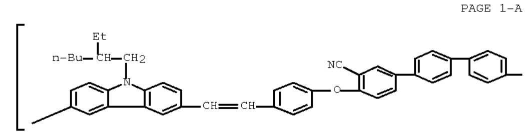
CRN 341036-58-6
CMF C26 H14 F2 N2



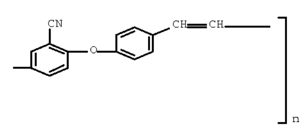
CAS Registry Number
458556-60-0 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenyleneoxy(3,3'''-dicyano[1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diyl)oxy-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L38 ANSWER 34 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2004:6378 CAPLUS Full-text

Document Number
140:322022

Title
Absorption spectra of new synthesized electroluminescent materials of poly-N-vinylcarbazole derivatives

Author/Inventor
Makowska-Janusik, M.; Sanetra, J.; Palmers, H.; Bogdal, D.; Gondek, E.; Kityk, I. V.

Patent Assignee/Corporate Source
Institute of Physics WSP, Czestochowa, 42200, Pol.

Source
Materials Letters (2004), 58(5), 555-562 CODEN: MLETDJ; ISSN: 0167-577X

Document Type
Journal

Language
English

Abstract
Absorption spectra in the new synthesized poly-N-vinylcarbazole (PNVK) materials are investigated both theor. as well as exptl. The investigated materials were modified by substitution of the backside groups by electron acceptors Cl, Br, I and by donor methoxy in the position 3,6 of the carbazole. At the same time, a shift of the carbazole group with respect to the polymer backbone and copolymn. with coumarin containing monomers was observed. The agreement between the theor. calculated and exptl. measured spectra was observed with a satisfactory coincidence (within the 12 nm). The proposed method can be considered as a way of materials engineering and search of new electroluminescent materials.

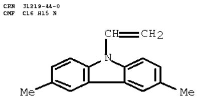
Hit Structure

CAS Registry Number
677732-97-7 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-ethenyl-3,6-dimethyl-, homopolymer (9CI) (CA INDEX NAME)

CM
1

CRN 31219-44-0
CMF C16 H15 N



OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

L38 ANSWER 35 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2003:919103 CAPLUS Full-text

Document Number
141:79417

Title
Polymers of selenium-containing heterocycle compounds and their application in preparing luminescent materials

Author/Inventor
Cao, Yong; Yang, Renqiang; Yang, Wei

Patent Assignee/Corporate Source

Huanan University of Science and Technology, Peop. Rep. China

Source
Faming Zhuanli Shenqing Gongkai Shuomingshu, 30 pp. CODEN: CNXXEV

Document Type
Patent

Language
Chinese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1399499	A	20030226	CN 2002-134219	20020920
CN 100558786	C	20091111		
CN 101343352	A	20090114	CN 2008-10210612	20080820
CN 101343352	B	20110817		
CN 101685836	A	20100331	CN 2010-10244975	20080820
CN 101685836	B	20110817		
CN 101685837	A	20100331	CN 2010-10244968	20080820

Abstract

Title polymers are characterized by containing structural units derived from aromatic heterocyclic compds. having selenium element. The polymers of this invention have high quantum yields, good color purity, and long-term stability and are suitable by manufacture of high-resolution full-colo flat-screen displays and Photoelec. devices.

Hit Structure

CAS Registry Number
570394-33-1 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-, polymer with 4,7-dibromo-2,1,3-benzoselenadiazole (9CI) (CA INDEX NAME)

CM
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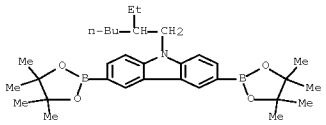
CRN 448955-07-1
CMF C30 H47 B2 N O4



CM
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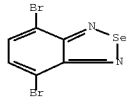
CRN 67334-42-0
CMF C6 H2 Br2 N2 Se



CAS Registry Number
591382-41-7 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-dibromo-9-(2-ethylhexyl)-, polymer with 4,7-dibromo-2,1,3-benzoselenadiazole and 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9H-carbazole (9CI) (CA INDEX NAME)

CM
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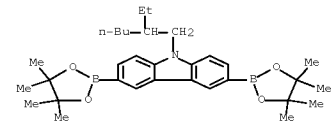
CRN 448955-07-1
CMF C30 H47 B2 N O4



CM
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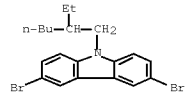
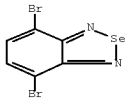
CRN 173063-52-0
CMF C20 H23 Br2 N



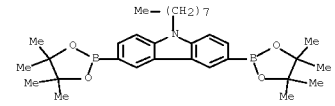
CM
3

CRN 67334-42-0
CMF C6 H2 Br2 N2 Se



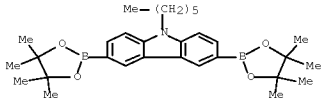
CAS Registry Number
478706-06-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-octyl-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (CA INDEX NAME)



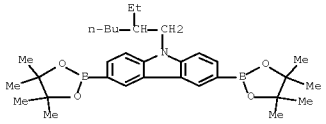
CAS Registry Number
448955-07-1 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-



CAS Registry Number
448955-07-1 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

L58 ANSWER 36 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2003:674704 CAPLUS Full-text

Document Number
139:271506

Title
Carbazole-based materials for guest-host electroluminescent systems.

Author(s)
Thoms, Travis P. S.; Chen, Jian-Ping

Patent Assignee(s)/Corporate Source
Canon Kabushiki Kaisha, Japan

Source
U.S. Pat. Appl. Publ., 10 pp. CODEN: USXXCO

Document Type
Patent

Language
English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030205696	A1	20031106	US 2002-136382	20020425
JP 2003317966	A	20031107	JP 2003-114193	20030418
JP 3780264	B2	20060531		

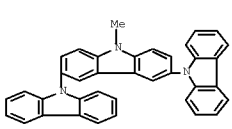
Abstract

Guest-host emissive systems for use in an organic light-emitting device are described which comprise a guest and a host, where the host comprises a carbazole-based compound with formula (I), where R1 is an electron-donating group, and at least one of R2-7 is an aromatic amine or carbazole moiety having hole-transport capability, and where the guest is a light-emitting compound having smaller band gap than the host. Guest-host emissive systems for use in an organic light-emitting device are described which comprise a host and a guest, where the host comprises a core selected from the group consisting of O, benzene, furan, thiophene, pyrrole and tetraphenylmethane, and ≥2 carbazole groups or carbazole groups substituted with electron-donating groups bonded to the core, and where the guest is a light-emitting material having a smaller band gap potential than the host. The disclosed host materials have a large band gap potential and high-energy triplet excited states to permit short-wavelength phosphorescent emission by the associated guest material.

Hit Structure

CAS Registry Number
620611-77-0 CAPLUS

Chemical or Trade Name
9,3':6',9''-Ter-9H-carbazole, 9'-methyl- (9CI) (CA INDEX NAME)



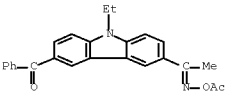
L38 ANSWER 37 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2003:714010 CAPLUS FullNext
Document Number
140:414057
Title
Photosensitive compositions comprising a ketoxime-ester as photo initiator and the use thereof for manufacturing color filters
Author/Inventor
Ahn, ...
Patent Assignee/Corporate Source
USA
Source
IP.com Journal (2003), 3(8), 11-12 (No. IPCOM000012462D), 6 May 2003 CODEN: IJPOBX, ISSN: 1533-0001
Document Type
Journal; Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	ID 12462D	20030506	ID 2003-12462D	20030506

Abstract
The photosensitive composition is described that is suitable for fabrication of color filters, for flat panel displays (liquid crystal display, plasma display panel electroluminescent display), and image sensors for scanners, digital- and video cameras. The photosensitive composition has high photosensitivity, low oxygen inhibition, high resolution, high thermal stability and contains, (1) ketoxime-ester as photoinitiator, (2) one or more radically polymerizable ethylenically unsatd. compound(s), (3) colorant(s), and (4) a binder resin. The ketoxime-ester is selected from compds. I (R1 = H, C3-6 cycloalkyl or C1-6 alkyl (optionally substituted with ≥1 halo or Ph), Ph (optionally substituted by ≥1 C1-6 alkyl, halo, OR3, SR4 and/or NR5R6), C1-6 alkoxy, benzyloxy (R3,R4 = H, substituted or unsubstituted alkyl, phenylalkyl, Ph, alkanoyl, benzoyl, naphthyl and R5, R6 = H, substituted or unsubstituted alkyl, alkoxyalkyl, phenylalkyl, alkanoyl,benzoyl, Ph, naphthyl); R2 = H, C1-20 alkyl (optionally substituted by ≤1 halogen, OR3, Ph and or Ph substituted by OR3, SR4, and or NR5,R6), C3-C6 cycloalkyl, C2-C20 alkyl (interrupted by ≥1 O and optionally substituted by ≥1 halo, OR3, SR4 and /or NR5R6), Ph (optionally substituted by ≥1 C1-6 alkyl, Ph, halo, OR3, SR4, NR5R6), C2-12 alkanoyl, C2-12 alkoxycarbonyl, Ar = H, Ph, naphthyl, benzoyl, naphthoyl (each optionally substituted by halo, C1-6 alkyl, OR3, SR4 and /or NR5R6; or with Ph optionally substituted by ≥1 OR3, SR4, NR5R6); X = nonbond, direct bond, CO, O, S, NR5; Y = O,S,SO, SO2, NR5; n = 0,1). The compds. comprising 1-(4-ethyl-6-(3-methylbenzoyl)-6H-carbazol-3-yl)ethanone-O-acetyloxime and similar ketoxime esters were employed for producing the red, green and blue colored coatings and a black matrix be used to manufacture flat panel displays.
Hit Structure

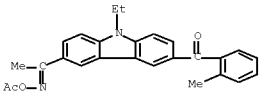
CAS Registry Number
478556-63-7 CAPLUS

Chemical or Trade Name
Ethanone, 1-[6-benzoyl-9-ethyl-9H-carbazol-3-yl]-, 1-(O-acetyloxime) (CA INDEX NAME)



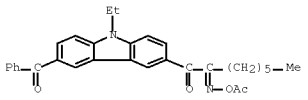
CAS Registry Number
478556-64-8 CAPLUS

Chemical or Trade Name
Ethanone, 1-[9-ethyl-6-(3-methylbenzoyl)-9H-carbazol-3-yl]-, 1-(O-acetyloxime) (CA INDEX NAME)



CAS Registry Number
490054-09-2 CAPLUS

Chemical or Trade Name
1,2-Octanedione, 1-[6-benzoyl-9-ethyl-9H-carbazol-3-yl]-, 2-(O-acetyloxime) (CA INDEX NAME)



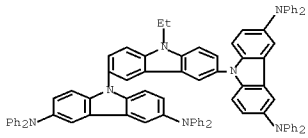
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 38 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2003:515703 CAPLUS FullNext
Document Number
139:29914E
Title
High-Tg carbazole derivatives as blue-emitting hole-transporting materials for electroluminescent devices
Author/Inventor
Kundu, Parimal; Thomas, K. R. Justin; Lin, Jiann T.; Tao, Yu-Tai; Chien, Chin-Hsiung
Patent Assignee/Corporate Source
Institute of Chemistry, Academia Sinica, Taipei, 115, Taiwan
Source
Advanced Functional Materials (2003), 13(6), 445-452 CODEN: AFMOE6; ISSN: 1616-301X
Document Type
Journal
Language
English

Abstract
Dicarbazolyl derivs. bridged by various aromatic spacers and decorated with peripheral diarylamines were synthesized using Ullmann and Pd-catalyzed C-N coupling procedures. These derivs. emit blue light in solution. In general, they possess high glass-transition temps. (Tg > 125°) which vary with the bridging segment and Me substitution on the peripheral amine. Double-layer organic light-emitting devices were successfully fabricated using these mols. as hole-transporting and emitting materials. Devices of the configuration ITO/HTL/TPBi/Mg:Ag (ITO: In Sn oxide; HTL: hole-transporting layer; TPBi: 1,3,5-tris(N-phenylbenzimidazol-2-yl)benzene) display blue emission from the HTL layer. The EL spectra of these devices appear slightly distorted due to the exciplex formation at the interfaces. However, for the devices of the configuration ITO/HTL/Alq3/Mg:Ag (Alq3 = tris(8-hydroxyquinoline)aluminum) a bright green light from the Alq3 layer was observed. This clearly demonstrates the facile hole-transporting property of the materials described here.
Hit Structure

CAS Registry Number
606527-67-9 CAPLUS

Chemical or Trade Name
[9,3':6',9''-Ter-9H-carbazole]-3,3'',6,6''-tetramine, 9''-ethyl-N,N,N',N',N'',N''-octaphenyl- (9CI) (CA INDEX NAME)



CAS Registry Number
606527-68-0 CAPLUS

Chemical or Trade Name
[9,3':6',9''-Ter-9H-carbazole]-3,3'',6,6''-tetramine, 9''-ethyl-N,N',N'',N'''-tetrakis(3-methylphenyl)-N,N',N'',N'''-tetraphenyl- (9CI) (CA INDEX NAME)

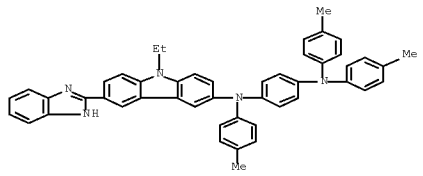
L38 ANSWER 39 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2003:532169 CAPLUS FullNext
Document Number
139:92577
Title
Organic EL device
Author/Inventor
Lin, Tung-Shen; Yeh, Kun-Tay
Patent Assignee/Corporate Source
Lightonik Technology Inc., Taiwan
Source
U.S. Pat. Appl. Publ., 13 pp. CODEN: USXXCO
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
TW 200301294&8	A1	20030701	TW 2001-142011	20011019
US 6602619	B2	20030805		

Abstract
An organic EL device which contains an anode, a cathode, and at least one organic thin-file layer including a light emitting layer which contains a compound represented I and II, wherein R1 represents a substituted or unsubstituted alkyl group, a substituted or unsubstituted alkenyl group, a substituted or unsubstituted aromatic hydrocarbon group, a substituted or unsubstituted aromatic heterocyclic group, a substituted or unsubstituted amino group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, or a substituted or unsubstituted alkoxycarbonyl group; and R1 is ≥1 functional groups represented by a H atom, halogen atom, nitro group, cyano group, carbonyl group, or R1. Any two R1 groups may form a ring. X represents O atom, N atom and S atom. A blue organic EL device can be provided according to the present invention.
Hit Structure

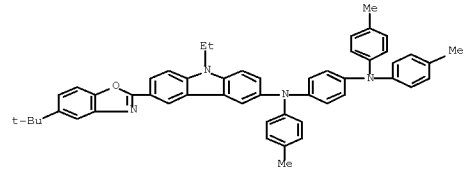
CAS Registry Number
556804-37-0 CAPLUS

Chemical or Trade Name
1,4-Benzenediamine, N1-[6-[12-benzimidazol-2-yl]-9-ethyl-9H-carbazol-3-yl]-N1,N4,N4-tris(4-methylphenyl)- (CA INDEX NAME)



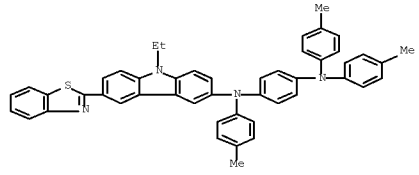
CAS Registry Number
556804-38-9 CAPLUS

Chemical or Trade Name
1,4-Benzenediamine, N1-[6-[5-(1,1-dimethylethyl)-2-benzoxazolyl]-9-ethyl-9H-carbazol-3-yl]-N1,N4,N4-tris(4-methylphenyl)- (CA INDEX NAME)



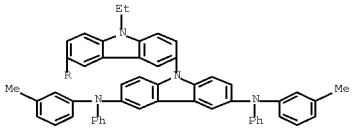
CAS Registry Number
556806-39-0 CAPLUS

Chemical or Trade Name
1,4-Benzenediamine, N1-[6-[2-benzothiazolyl]-9-ethyl-9H-carbazol-3-yl]-N1,N4,N4-tris(4-methylphenyl)- (CA INDEX NAME)

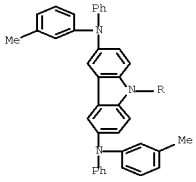


OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

PAGE 1-A

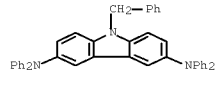


PAGE 2-A



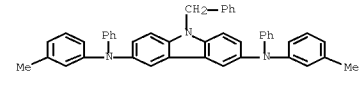
CAS Registry Number
131956-11-3 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3,N3,N6,N6-tetraphenyl-9-(phenylmethyl)- (CA INDEX NAME)



CAS Registry Number
144706-94-3 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3,N6-bis(3-methylphenyl)-N3,N6-diphenyl-9-(phenylmethyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 45 THERE ARE 45 CAPLUS RECORDS THAT CITE THIS RECORD (46 CITINGS)

L38 ANSWER 40 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2003:472573 CAPLUS FullNext
Document Number

139160162

Title
Organic electroluminescent material using calixarene or calixresorcinarene derivative

Author/Inventor
Momoda, Junji; Kawabata, Yuichiro; Otani, Tsuhaki

Patent Assignee/Corporate Source
Tokuyama Corporation, Japan

Source
PCT Int. Appl., 140 pp. CODEN: PIXXD2

Document Type
Patent

Language
Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003050201	A1	20030619	WO 2002-JP12921	20021206
AU 2002354442	A1	20030625	AU 2002-354442	20021206

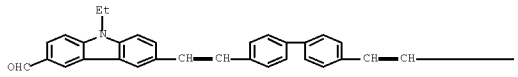
Abstract
The invention refers to an organic electroluminescent materials suitable for spin coating, comprising a calixarene or calixresorcinarene derivative with an organic luminescent group and/or an organic charge transport group, such as 4-[1-(2,2-diphenylvinyl)-biphenyl-2]phenylvinyl]phenyl.

Hit Structure

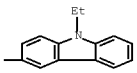
CAS Registry Number
546684-05-3 CAPLUS

Chemical or Trade Name
9H-Carbazole-3-carboxaldehyde, 9-ethyl-6-[2-[4'-(2-(9-ethyl-9H-carbazol-3-yl)ethenyl)[1,1'-biphenyl]-4-yl]ethenyl]- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 41 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2003:415914 CAPLUS Full-text

Document Number
139:7588

Title
Fluorene compound, polymers thereof having a polyphenylene group, and electroluminescent elements comprising the same

Author/Inventor
Cho, Hyun-Nam; Jung, Sung Hyun; Soh, Sang Won; Kim, Jong Bok

Patent Assignee/Corporate Source
Korea Institute of Science and Technology, S. Korea

Source
U.S. Pat. Appl. Publ., 37 pp. CODEN: USXXCO

Document Type
Patent

Language
English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030099859	A1	20030529	US 2002-271319	20021014
US 6800381	B2	20041005		
KR 2003034659	A	20030509	KR 2001-66330	20011026

Abstract
A fluorene compound and polymers thereof having a polyphenylene group, and EL element comprising the same, can be prepared through a Diels-Alder reaction of a compound having one or more cyclopentadienone group and a compound having one or more acetylene group and can be used as a core material for organic and polymeric EL element and/or other optical devices. 2,7-Bis(2,4,5-triphenylcyclopentadienon-3-yl)-9,9-di-n-hexylfluorene was prepared and polymerized with 2,7-diethynyl-9,9-di-n-hexylfluorene.

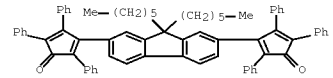
Hit Structure

CAS Registry Number
539385-00-5 CAPLUS

Chemical or Trade Name
2,4-Cyclopentadien-1-one, 3,3'-(9,9-dihexyl-9H-fluorene-2,7-diyl)bis[2,4,5-triphenyl-, polymer with 3,6-diethynyl-9-hexyl-9H-carbazole (9CI) (CA INDEX NAME)

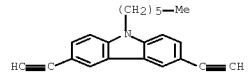
CM
1

CRN 539384-92-2
CMF C71 H62 O2



CM
2

CRN 156972-66-0
CMF C28 H21 N

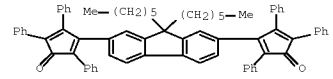


CAS Registry Number
539385-01-6 CAPLUS

Chemical or Trade Name
2,4-Cyclopentadien-1-one, 3,3'-(9,9-dihexyl-9H-fluorene-2,7-diyl)bis[2,4,5-triphenyl-, polymer with 9-hexyl-3,6-bis[(trimethylsilyl)ethynyl]-9H-carbazole (9CI) (CA INDEX NAME)

CM
1

CRN 539384-92-2
CMF C71 H62 O2



CM
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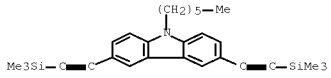
CRN 156972-67-1

CMF C28 H37 N Si2

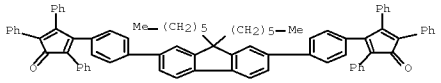


CAS Registry Number
539385-07-2 CAPLUS

Chemical or Trade Name
2,4-Cyclopentadien-1-one, 3,3'-(9,9-dihexyl-9H-fluorene-2,7-diyldi-4,1-phenylene)bis[2,4,5-triphenyl-, polymer with 3,6-diethynyl-9-hexyl-9H-carbazole (9CI) (CA INDEX NAME)

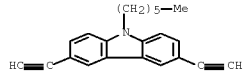
CM
1

CRN 539384-94-4
CMF C83 H70 O2



CM
2

CRN 156972-66-0
CMF C28 H21 N



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 42 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2003:413410 CAPLUS Full-text

Document Number
139:157060

Title
Novel electroluminescent polymers derived from carbazole

Author/Inventor
Huang, J.; Niu, Y.; Xu, Y.; Hou, Q.; Yang, W.; Mo, Y.; Yuan, M.; Cao, Y.

Patent Assignee/Corporate Source
Institute of Polymer Optoelectronic Materials and Devices, South China University of Technology, Canton, 510640, Peop. Rep. China

Source
Synthetic Metals (2003), 135-136, 161-162 CODEN: SYMEDZ, ISSN: 0379-6779

Document Type
Journal

Language
English

Abstract
The authors report synthesis and characterization of an entirely new class of polycarbazole-based main chain copolymers with varieties of aromatic rings and heterocycles as a comonomer by Suzuki coupling reaction. The copolymers are soluble in common organic solvents and highly fluorescent. Conjugated carbazole-segment provides good hole injection and hole-transport properties. The emission color can be tuned in entirely visible region by careful choice of narrow band-gap comonomers. Preliminary device characteristics are promising.

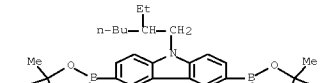
Hit Structure

CAS Registry Number
569677-31-0 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-, homopolymer (9CI) (CA INDEX NAME)

CM
1

CRN 440955-07-1
CMF C32 H47 B2 N O4

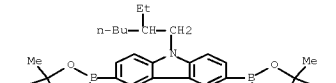


CAS Registry Number
569677-33-2 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-, polymer with dibromoanthracene (9CI) (CA INDEX NAME)

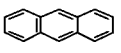
CM
1

CRN 440955-07-1
CMF C32 H47 B2 N O4



CM
2

CRN 30193-70-5
CMF C14 H8 Br2
CCI IDS



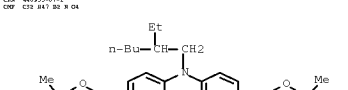
2 (D1—Br)

CAS Registry Number
569677-35-4 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-, polymer with dibromothiophene (9CI) (CA INDEX NAME)

CM
1

CRN 440955-07-1
CMF C32 H47 B2 N O4



CM
2

CRN 152321-65-8
CMF C4 H2 Br2 S
CCI IDS

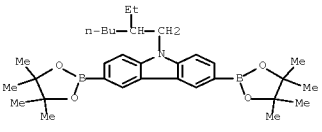
2 (D1—Br)

CAS Registry Number
570394-31-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-, polymer with 4,7-dibromo-2,1,3-benzothiadiazole (9CI)
(CA INDEX NAME)

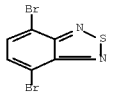
CM
1

CRN 449955-07-1
CMF C30 H47 B2 N O4



CM
2

CRN 15155-41-6
CMF C6 H2 Br2 N2 S

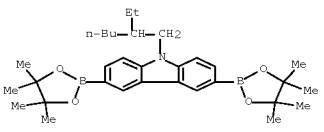


CAS Registry Number
570394-33-1 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-, polymer with 4,7-dibromo-2,1,3-benzoselenadiazole
(9CI) (CA INDEX NAME)

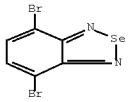
CM
1

CRN 449955-07-1
CMF C30 H47 B2 N O4



CM
2

CRN 63224-42-0
CMF C6 H2 Br2 N2 Se

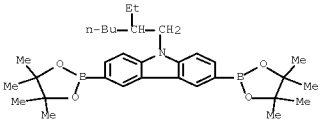


CAS Registry Number
570394-35-3 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-, polymer with 4,7-bis(5-bromo-2-thienyl)-2,1,3-benzothiadiazole (9CI) (CA INDEX NAME)

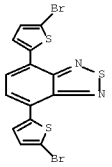
CM
1

CRN 449955-07-1
CMF C30 H47 B2 N O4



CM
2

CRN 288071-67-4
CMF C14 H6 Br2 N2 S3



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

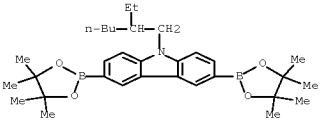
L38 ANSWER 43 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2009:411774 CAPLUS Full-text
Document Number
139:214006
Title
Novel energy transfer carbazole-based light-emitting copolymers
Author(s)
Huang, Jian; Niu, Yu-Hua; Yang, Wei; Hou, Qiong; Xu, Yi-Shu; Yuan, Min; Cao, Yong
Patent Assignee/Corporate Source
Institute of Polymer Optoelectronic Materials and Devices, South China University of Technology, Canton, 510640, Peop. Rep. China
Source
Huaxue Xuebao (2009), 67(5), 765-773 CODEN: HHHPA4; ISSN: 0567-7351
Document Type
Journal
Language
Chinese
Abstract
A series of novel electroluminescent polycarbazole-based main chain copolymers with varieties of aromatic rings and heterocycles as comonomer has been synthesized by Suzuki coupling reaction. The copolymers are soluble in common organic solvents and are highly fluorescent. Conjugated carbazole segment provides good hole-injection and hole-transport properties. Narrow band-gap heterocycles and aromatic rings, such as benzothiadiazole, benzoselenadiazole, 4,7-dithien-2-yl-2,1,3-benzothiadiazole, thiophenes, and anthracene in less than 50% of molar ratio in the copolymer were incorporated as at trapping center. The efficient energy transfer due to exciton trapping on the narrow band-gap sites was observed. The emission color can be tuned in entire visible region by carefully selecting the narrow band-gap comonomers. The use of conjugated polycarbazole as wide-band-gap segment could provide a new way to combine good hole-injection properties along with color tuning ability.
Hit Structure

CAS Registry Number
449955-07-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-dibromo-9-(2-ethylhexyl)-, polymer with 4,7-dibromo-2,1,3-benzothiadiazole and 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9H-carbazole (9CI) (CA INDEX NAME)

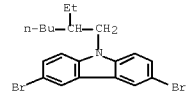
CM
1

CRN 449955-07-1
CMF C30 H47 B2 N O4



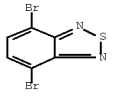
CM
2

CRN 173063-52-0
CMF C20 H23 Br2 N



CM
3

CRN 15155-41-6
CMF C6 H2 Br2 N2 S



CAS Registry Number
591349-45-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-dibromo-9-(2-ethylhexyl)-, polymer with 3,5-dibromothiophene and 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9H-carbazole (9CI) (CA INDEX NAME)

CM
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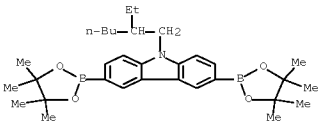
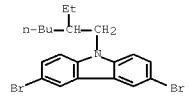
CRN 449955-07-1
CMF C30 H47 B2 N O4



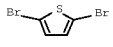
CM
2

CRN 173063-52-0
CMF C20 H23 Br2 N



CM
3

CRN 3141-27-3
CMF C4 H2 Br2 S



CAS Registry Number
591349-46-6 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-dibromo-9-(2-ethylhexyl)-, polymer with 9,10-dibromoanthracene and 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9H-carbazole (9CI) (CA INDEX NAME)

CM
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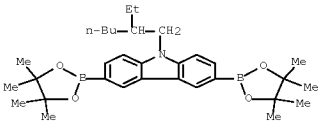
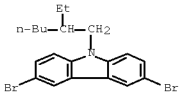
CRN 449955-07-1
CMF C30 H47 B2 N O4



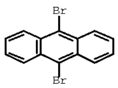
CM
2

CRN 173063-52-0
CMF C20 H23 Br2 N



CM
3

CRN 523-27-3
CMF C14 H8 Br2

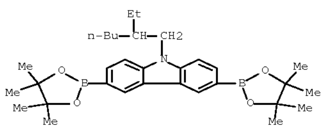


CAS Registry Number
591249-47-7 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-dibromo-9-(2-ethylhexyl)-, polymer with 4,7-dibromo-2,1,3-benzoselenadiazole and 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9H-carbazole (9CI) (CA INDEX NAME)

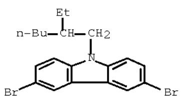
CM
1

CRN 448955-87-1
CMF C32 H47 B2 N O4



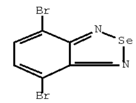
CM
2

CRN 173063-52-0
CMF C20 H23 Br2 N



CM
3

CRN 63224-42-0
CMF C6 H2 Br2 N2 Se

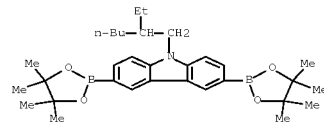


CAS Registry Number
591249-48-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-dibromo-9-(2-ethylhexyl)-, polymer with 4,7-bis(5-bromo-2-thienyl)-2,1,3-benzothiadiazole and 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9H-carbazole (9CI) (CA INDEX NAME)

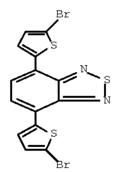
CM
1

CRN 448955-87-1
CMF C32 H47 B2 N O4



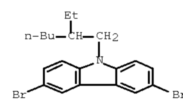
CM
2

CRN 288071-87-4
CMF C14 H6 Br2 N2 S3



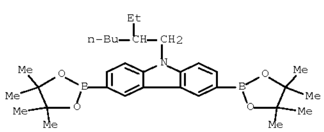
CM
3

CRN 173063-52-0
CMF C20 H23 Br2 N



CAS Registry Number
448955-87-1 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L38 ANSWER 44 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2003:388869 CAPLUS Full-text

Document Number
139:117909

Title
Light-emitting alternating copolymers and their intramolecular charge transfer state

Author/Inventor
Lin, Hongzhen; Yang, Junlin; Zheng, Min; He, Qingguo; Huang, Hongmin; Bai, Fenglian

Patent Assignee/Corporate Source
Laboratory of Organic Solids, Center for Molecular Science, Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100080, Peop. Rep. China

Source
Polymers for Advanced Technologies (2003), 14(3-5), 303-308 CODEN: PADTE5; ISSN: 1042-7147

Document Type
Journal

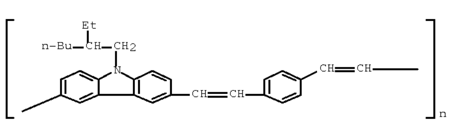
Language
English

Abstract
Two light-emitting conjugated polymers having arylenevinylene and a N-alkylcarbazole moieties in the main chain were studied, poly[(9-(2-ethyl-hexyl)-9H-carbazol-3,6-ylene)-alt-(anthracen- 9,10-ylene) vinylene], Cz-PAV and poly[(9-(2-ethyl-hexyl)-9H-carbazol-3,6- ylene)-alt-(phenylene)] (Cz-PPV). The formation of an intramol. charge transfer state was probed within the repeating units of the copolymers. A tail absorption band and dual fluorescence were found for poly[(9-(2-ethyl-hexyl)-9H-carbazol-3,6-ylene)-alt-(anthracen-9,10-ylene) vinylene], Cz-PAV. Solvent polarity effects were studied by steady-state spectroscopy and fluorescence-lifetime measurements. Fluorescence emission spectra at 77 K were also explored. A photoinduced intramol. charge transfer state was formed in Cz-PAV. The formation of this state may be related to the electron affinity of the acceptor group in the copolymer and to the mol. conformation of the copolymer.

Hit Structure

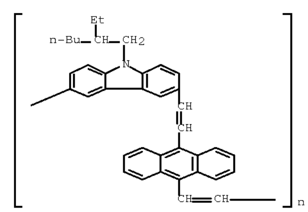
CAS Registry Number
265126-14-5 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)



CAS Registry Number
265126-18-9 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-9,10-anthracenediyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)

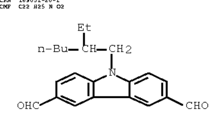


CAS Registry Number
562099-34-7 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)-, polymer with 1,4-bis(chloromethyl)benzene (9CI) (CA INDEX NAME)

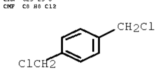
CM
1

CRN 169051-20-1
CMF C22 H25 N O2



CM
2

CRN 623-25-6
CMF C8 H8 Cl2

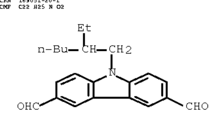


CAS Registry Number
562099-35-8 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)-, polymer with 9,10-bis(chloromethyl)anthracene (9CI) (CA INDEX NAME)

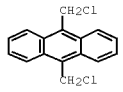
CM
1

CRN 169051-20-1
CMF C22 H25 N O2



CM
2

CRN 10387-13-0
CMF C16 H12 Cl2



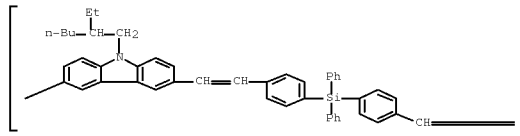
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L38 ANSWER 45 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2003:374852 CAPLUS Full-text
Document Number
139:214601
Title
Novel silicon-based alternating copolymers: Synthesis, photophysical properties, and tunable EL colors
Author(s)/Inventor
Kim, Hwan Kyu; Park, Kyung Lim; Baek, Nam Seob; Lee, Youngil; Yoshino, Katsumi
Patent Assignee/Corporate Source
S. Korea
Source
Macromolecular Symposia (2003), 192(7th Pacific Polymer Conference, 2001), 135-149 CODEN: MSYMEC; ISSN: 1022-1360
Document Type
Journal
Language
English
Abstract
Silicon-based alternating copolymers for tunable electroluminescent (EL) colors were synthesized by the Heck reaction of alkyldialkylsubstituted distyrylsilanes with aromatic or heteroarom. dibromides and their thermal, photophys. and electroluminescent properties were studied. Most of the polymers exhibited a blue-green EL color at an operating voltage of +12 V. Unusually, a white EL color was observed from an EL device based on the polymer (SiPNPVK) prepared from diphenyldistyrylsilane and a dibromocarbazole-derivative. From photophys. studies and the time-resolved PL spectroscopies, it might be attributed to the formation of stabilized excited state in SiPNPVK. Furthermore, silicon-based alternating copolymers containing electron transporting oxadiazole units in the main chain were synthesized in order to reduce the operating voltage of their LED with increasing the electron affinity of the main chain. The photophys. and electroluminescent properties of the polymers were also studied.
Hit Structure

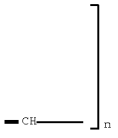
CAS Registry Number
109575-39-3 CAPLUS

Chemical or Trade Name
Poly[9-(2-ethylhexyl)-3H-carbazole-3,6-diyl-1,2-ethenediyl-1,4-phenylene(diphenylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A

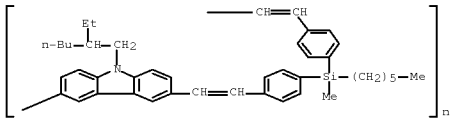


PAGE 1-B



CAS Registry Number
109576-01-0 CAPLUS

Chemical or Trade Name
Poly[9-(2-ethylhexyl)-3H-carbazole-3,6-diyl-1,2-ethenediyl-1,4-phenylene(hexylmethylsilylene)-1,4-phenylene-1,2-ethenediyl] (CA INDEX NAME)

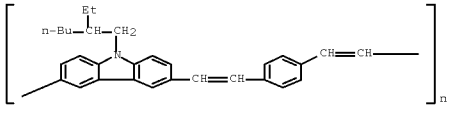


OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L38 ANSWER 46 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2003:370835 CAPLUS Full-text
Document Number
140:128946
Title
Carbazole-containing light-emitting polymers: properties of excited states
Author(s)/Inventor
Lin, Hongzhen; Zheng, Min; Yang, Junlin; Bai, Fenglian
Patent Assignee/Corporate Source
Laboratory of Organic Solids, Center for Molecular Science, Institute for Chemistry, Chinese Academy of Sciences, Beijing, 100080, Peop. Rep. China
Source
Chinese Science Bulletin (2003), 48(7), 637-642 CODEN: CSBUEF; ISSN: 1001-6538
Document Type
Journal
Language
English
Abstract
A series of light-emitting conjugated polymers alternatively involving carbazole and bis(styrene arylene moieties in the main chain were synthesized via Wittig-Horner type copolymn. The photoinduced charge transfer process relating to these polymers was investigated by using the technique of fluorescence spectroscopy. The interaction between excited copolymers and CBD in benzene solution was studied. The fluorescence quenching can be well described by the "sphere-of-action" mechanism. It is believed that two basic steps are involved in the quenching process, i.e. the diffusion of excitation within the conjugated polymers and the dissociation of the excitons trapped by fullerene. The radius of the sphere-of-action can be related to the exciton diffusion length, which depends on the lifetime of the exciton. The dynamic fluorescence quenching of the copolymers by another quencher, 1,4-dicyanobenzene (DCB) was also surveyed. Copolymers with different chain conformations show different temperature effects in the dynamic quenching. A planar conformation is beneficial for the quenching via bimol. collision.
Hit Structure

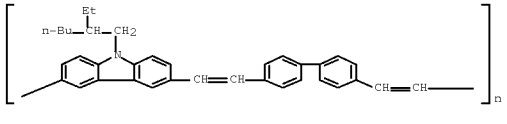
CAS Registry Number
265126-14-5 CAPLUS

Chemical or Trade Name
Poly[9-(2-ethylhexyl)-3H-carbazole-3,6-diyl-1,2-ethenediyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)



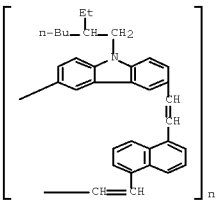
CAS Registry Number
265126-15-6 CAPLUS

Chemical or Trade Name
Poly[9-(2-ethylhexyl)-3H-carbazole-3,6-diyl-1,2-ethenediyl[1,1'-biphenyl]-4,4'-diyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)



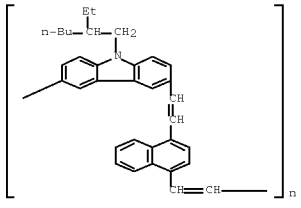
CAS Registry Number
265126-16-7 CAPLUS

Chemical or Trade Name
Poly[9-(2-ethylhexyl)-3H-carbazole-3,6-diyl-1,2-ethenediyl-1,5-naphthalenediyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)



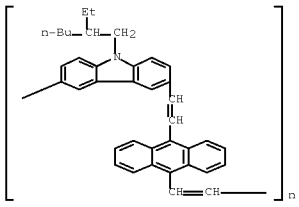
CAS Registry Number
265126-17-8 CAPLUS

Chemical or Trade Name
Poly[9-(2-ethylhexyl)-3H-carbazole-3,6-diyl-1,2-ethenediyl-1,4-naphthalenediyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)



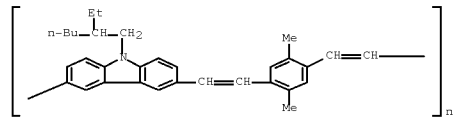
CAS Registry Number
265126-18-9 CAPLUS

Chemical or Trade Name
Poly[9-(2-ethylhexyl)-3H-carbazole-3,6-diyl-1,2-ethenediyl-9,10-anthracenediyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)



CAS Registry Number
365126-14-0 CAPLUS

Chemical or Trade Name
Poly[[9-(3-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl(2,5-dimethyl-1,4-phenylene)-1,2-ethenediyl] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

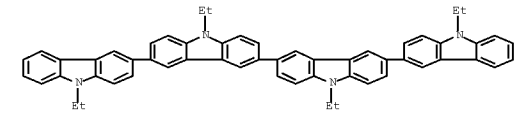
L38 ANSWER 47 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2003:353899 CAPLUS Full text
Document Number
138:360196
Title
Electroluminescent device comprising compound with linked carbazole units
Author(s)/Inventor
Tominaga, Takeshi; Makiyama, Akira; Kohama, Toru
Patent Assignee/Corporate Source
Toray Industries, Inc., Japan
Source
Jpn. Kokai Tokkyo Koho, 10 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003133075	A	20030509	JP 2002-214674	20020724

Abstract
The invention refers to an electroluminescent device comprising a compound with linked carbazole units in the luminescent layer wherein the carbazole may contain alkyl, cycloalkyl, aralkyl, alkenyl, cycloalkenyl, alkynyl, hydroxy, and/or mercapto substituents on the C atoms, an alkyl or aryl substituent on the N atom, linked by a single bond, an alkyl, alkylene, cycloalkylene, aryl, amino heterocyclic silylether and/or thioether chain between C atoms on the carbazole structure.
Hit Structure

CAS Registry Number
144446-67-7 CAPLUS

Chemical or Trade Name
2,3':6',2'':6'',2'''-Quater-9H-carbazole, 9,9',9'',9'''-tetraethyl- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L38 ANSWER 46 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2003:117932 CAPLUS Full text
Document Number
138:177962
Title
Stabilization of luminescence from organic materials with compounds of phenolic origin
Author(s)/Inventor
Baldacchini, Giuseppe; Monteverdi, Rosa Maria; Pace, Angelo; Gaglardi, Serena; Pode, Ramchandra; Baldacchini, Tommaso
Patent Assignee/Corporate Source
Ente per le Nuove Tecnologie, l'Energia e l'Ambiente (ENEA), Italy; Info & Tech S.p.A.
Source
PCT Int. Appl., 28 pp. CODEN: PIXXD2
Document Type
Patent
Language
English
Patent Information

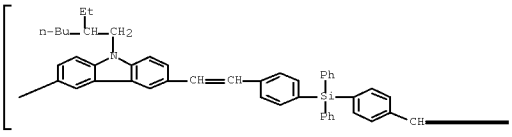
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003012005	A1	20030213	WO 2002-IT504	20020730
IT 2001RM0471	A1	20030203	IT 2001-RM471	20010802
AU 2002326149	A1	20030217	AU 2002-326149	20020730
EP 1412451	A1	20040428	EP 2002-760559	20020730
US 20040236790	A1	20041202	US 2004-485470	20040624

Abstract
The use of compds. of phenolic origin for the stabilization of the luminescence from organic materials, including organometallic materials, is described. Processes for the stabilization of the luminescence from organic compds. entailing mixing the luminescent compds. with the stabilizing compds. are also described, as are the resulting composite materials and light-emitting devices employing them.
Hit Structure

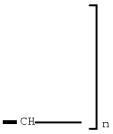
CAS Registry Number
109575-39-3 CAPLUS

Chemical or Trade Name
Poly[[9-(3-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(diphenylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L38 ANSWER 40 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2003:21165 CAPLUS Full text
Document Number
138:97996
Title
Organic electroluminescent component
Author(s)/Inventor
Yamada, Takatoshi; Kita, Hiroshi
Patent Assignee/Corporate Source
Konica Co., Japan
Source
Jpn. Kokai Tokkyo Koho, 14 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003007466	A	20030110	JP 2001-184804	20010619
JP 4457529	B2	20100428		

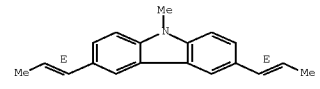
Abstract
The invention refers to an organic electroluminescent device comprising a luminescent material and a diphenylamine derivative polymer (1X = single bond, O, S, Se, Trace element, N(R14) or CR15R16; R1-14 = H or substituent; R10,11 and R12,13 may join together to form rings; R15,16 = H or substituent and may join together to form a ring), to obtain high luminescence and long lifetimes.
Hit Structure

CAS Registry Number
65297-90-1 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-methyl-3,6-di-(1H)-1-propenyl-, homopolymer (9CI) (CA INDEX NAME)

CM
1

CRN 487021-61-4
CMF C19 H19 N

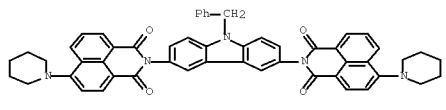


OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 30 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2003:6884 CAPLUS Full text
Document Number
138:360010
Title
A novel family of twisted molecular luminescent materials containing carbazole unit for single-layer organic electroluminescent devices
Author(s)/Inventor
Zhu, Weihong; Hu, Meng; Yao, Rong; Tian, He
Patent Assignee/Corporate Source
Institute of Fine Chemicals, East China University of Science & Technology, Shanghai, 200237, Peop. Rep. China
Source
Journal of Photochemistry and Photobiology, A: Chemistry (2002), 154(2-3), 169-177 CODEN: JPPCEJ; ISSN: 1010-6030
Document Type
Journal
Language
English
Abstract
A novel family of twisted naphthalimide-carbazole dyads (N-VK) and triads (N-VK-N) with moieties capable of carrier-balance and electroluminescence was synthesized. The key mol. structure design includes the use of carrier-transporting fragments, together with aliphatic side groups that can eliminate the π-π stacking tendency and favor the formation of stable amorphous state. It shows that there exists an effective singlet-singlet energy transfer in dyads (N-VK) and triads (N-VK-N) due to the overlap between the absorption of naphthalimide moiety and the emission of carbazole moiety. Such promising twisted emitters with glass-transition temperature of Tg=115 °C, which can generate stable cation and anion radicals for exciton recombination, were successfully utilized in single-layer electroluminescent (EL) devices to avoid the layer-layer exciton quenching and micro-cavity effect. The single- and multi-layer devices fabricated with these compds. have been studied in an effort to improve the device efficiency and to gain insight into the luminescent mechanism. As for typical preliminary single-layer EL devices, only emission from naphthalimide was observed with maximum luminescence of 260 cd/m2 at the driving voltage of 18 V.
Hit Structure

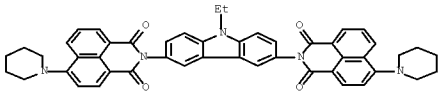
CAS Registry Number
343374-37-0 CAPLUS

Chemical or Trade Name
1H-Benz[de]isoquinoline-1,3(2H)-dione, 2,2'-[9-(phenylmethyl)-9H-carbazole-3,6-diyl]bis[6-(1-piperidinyl)- (CA INDEX NAME)



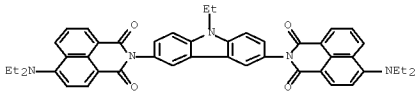
CAS Registry Number
537678-56-9 CAPLUS

Chemical or Trade Name
1H-Benz[de]isoquinoline-1,3(2H)-dione,
2,2'-(9-ethyl-9H-carbazole-3,6-diyl)bis[6-(1-piperidinyl)- (CA INDEX NAME)



CAS Registry Number
537678-51-9 CAPLUS

Chemical or Trade Name
1H-Benz[de]isoquinoline-1,3(2H)-dione,
2,2'-(9-ethyl-9H-carbazole-3,6-diyl)bis[6-(diethylamino)- (CA INDEX NAME)



OS.CITING REF COUNT: 57 THERE ARE 57 CAPLUS RECORDS THAT CITE THIS RECORD (57 CITINGS)

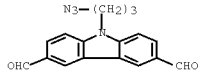
L38 ANSWER 51 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:692941 CAPLUS FullText
Document Number
138:311211
Title
Blue organic light-emitting diodes with carbazole-based small molecules
Author/Inventor
Lee, Ji-Hoon; Woo, Hyung-Suk; Kim, Tae-Wan; Park, Jong-Wook
Patent Assignee/Corporate Source
Corporate R and D Center, Samsung SDI, Youngin City, 449-902, S. Korea
Source
Optical Materials (Amsterdam, Netherlands) (2003), 21(1-3), 225-229 CODEN: OMATET; ISSN: 0925-3467
Document Type
Journal
Language
English
Abstract
The authors synthesized bis[3-N-ethylcarbazolyl)-1-naphthaldene (BECP) and bis[(3-N-ethylcarbazolyl)-cyano-terephthaldene and characterized electroluminescence properties of these materials. The authors' device shows a strong blue emission at 472 nm with a luminance efficiency of 0.9 lm/W at a voltage, a.c.d., and a brightness of 8 V, 5.7 mA/cm2 and 130 cd/m2, resp. and shows typical rectifying diode characteristics in ITO/CuPc/TPD/BECP/Bu-PBD or Alq3/LiF/Al device.
Hit Structure

CAS Registry Number
332065-48-6 CAPLUS

Chemical or Trade Name
1,4-Benzenedicarbonitrile, 2,5-bis(pentyloxy)-, polymer with
9-(3-oxidopropyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

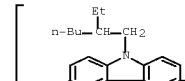
CM
1

CRN 332065-09-5
CMF C17 H14 N4 O2



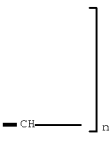
CM
2

CRN 102600-11-3
CMF C20 H25 N2 O2



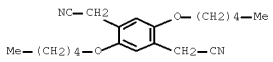
PAGE 1-A

PAGE 1-B



OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)

L38 ANSWER 54 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:76106 CAPLUS FullText
Document Number
138:90165
Title
Synthesis and LED device properties of carbazole and naphthalene-contained conjugated polymers
Author/Inventor
Shim, Hong-Ku; Ahn, Taek; Song, Seung-Yong
Patent Assignee/Corporate Source
Department of Chemistry and School of Molecular Science (BK21), Center for Advanced Functional Polymers, Korea Advanced Institute of Science and Technology, Taejon, 305-701, S. Korea
Source
Thin Solid Films (2002), 417(1-2), 7-13 CODEN: THSFAP; ISSN: 0040-6090
Document Type
Journal
Language

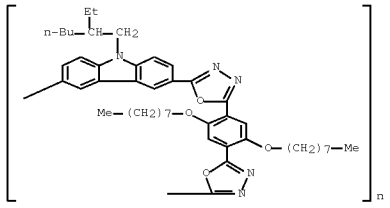


OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L38 ANSWER 52 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:672671 CAPLUS FullText
Document Number
138:90348
Title
End-group analysis of blue light-emitting polymers using matrix-assisted laser desorption/ionization time-of-flight mass spectrometry
Author/Inventor
Chen, Hui; He, Meiyu; Pei, Jian; Liu, Bin
Patent Assignee/Corporate Source
Department of Chemistry, Peking University, Beijing, 100871, Peop. Rep. China
Source
Analytical Chemistry (2002), 74(24), 6252-6258 CODEN: ANCHAM; ISSN: 0003-2700
Document Type
Journal
Language
English
Abstract
An anal. method based on matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS) has been applied to provide information on the structure of a copolymer, e.g., repeat unit and end group. Seven conjugated polymers, which have been demonstrated as the active component in blue light-emitting diodes, were synthesized through Suzuki polycondensation reaction in the presence of Pd(PPh3)4 catalyst. Their mol. wts. were obtained using gel permeation chromatog. anal. MALDI-TOF MS was used to investigate the structure information in detail. The proposed end-group structures were confirmed by the identity between the observed and the simulated isotopic distribution of each polymer. The results demonstrate that these synthetic polymers possess various end groups and even contain macrocycles. The catalyst Pd(PPh3)4 was found to introduce Ph end groups via an aryl-aryl exchange between the catalytic palladium intermediate and the triphenylphosphine ligand. All these results are based on the anal. of the mass spectrum data, which suggests that MALDI-TOF MS is an extraordinarily strong tool in synthetic polymer structure anal.
Hit Structure

CAS Registry Number
344034-31-5 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,3,4-oxadiazole-2,5-diyl[2,5-bis(octyloxy)-1,4-phenylene]-1,3,4-oxadiazole-2,5-diyl] (9CI)
(CA INDEX NAME)

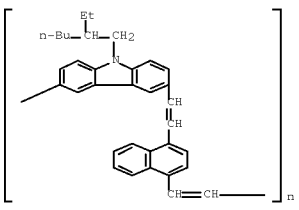


OS.CITING REF COUNT: 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

English
Abstract
Two new fully conjugated, alternating copolymers containing both carbazole and naphthalene units were prepared through the Wittig condensation polymerization (carbazole units were linked with naphthalene units by 1,4- and 2,6-linkages). The maximum photoluminescence wavelengths of 2,6-PNCPV and 1,4-PNCPV were found at 498 and 545 nm, which correspond to the greenish-blue and the yellow emission region, resp., depending on the naphthalene linkage. The turn-on voltages of 2,6-PNCPV and 1,4-PNCPV were 10.4 and 9.6 V, resp., when the single-layer light-emitting diodes of ITO/2,6-PNCPV or 1,4-PNCPV/ATO/glass were fabricated. The electroluminescence spectrum of 1,4-PNCPV exhibited EL emissive band at 553 nm (yellow emission). Interestingly, the EL spectrum of 2,6-PNCPV was tailed to the longer wavelength region from the EL maximum point of 496 nm, which may be caused by formation of the intermol. excimers. The emission color of 2,6-PNCPV was almost white to the naked eyes due to the tailing of 2,6-PNCPV emission and the weak interchain excimer peak at 750 nm.
Hit Structure

CAS Registry Number
365126-17-0 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-naphthalenediyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)

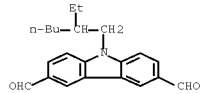


CAS Registry Number
404496-45-7 CAPLUS

Chemical or Trade Name
Phosphonium, [2,6-naphthalenediylbis(methylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

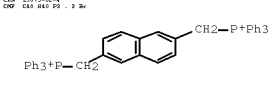
CM
1

CRN 169051-20-1
CMF C33 H25 N O2



CM
2

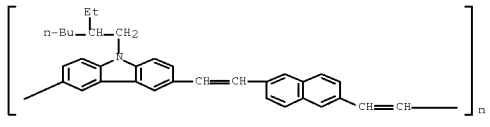
CRN 25075-81-4
CMF C40 H40 P2 . 2 Br



●2 Br⁻

CAS Registry Number
404496-46-8 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-2,6-naphthalenediyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)

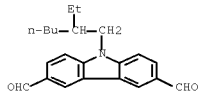


CAS Registry Number
404496-67-5 CAPLUS

Chemical or Trade Name
Phosphonium, [1,4-naphthalenediylbis(methylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

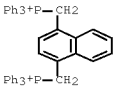
CM
1

CRN 169051-20-1
CMF C32 H35 N O2



CM
2

CRN 72662-20-7
CMF C40 H40 P2 . 2 Br



OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

L36 ANSWER 55 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:734985 CAPLUS Full-text
Document Number
138:30644
Title
Novel red electroluminescent polymers derived from carbazole and 4,7-bis(2-thienyl)-2,1,3-benzothiadiazole
Author(s)
Huang, Jian; Xu, Yibin; Hou, Qiong; Yang, Wei; Yuan, Ming; Cao, Yong
Patent Assignee/Corporate Source
Institute of Polymer Optoelectronic Materials and Devices, South China University of Technology, Canton, 510640, Peop. Rep. China
Source
Macromolecular Rapid Communications (2002), 23(12), 709-712 CODEN: MRCOE8; ISSN: 1022-1336
Document Type
Journal
Language
English
Abstract
A series of novel carbazole-based soluble copolymers of different composition was synthesized by Suzuki coupling reaction. Efficient energy transfer from the wide-band-gap segment polycarbazole due to exciton trapping on narrow-band-gap bis(thienyl)benzothiadiazole sites, has been observed. Maximum electroluminescence wavelengths of the copolymers varied between 658 nm and 716 nm, and the external quantum efficiency for copolymer devices is 0.3% for copolymers with 20% benzothiadiazole content.
Hit Structure

CAS Registry Number
478706-01-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-dibromo-9-octyl-, polymer with 9-octyl-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9H-carbazole (9CI) (CA INDEX NAME)

CM
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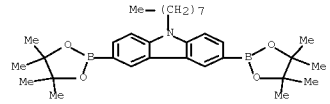
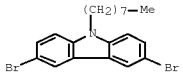
CRN 478706-06-6
CMF C52 H67 B2 N O4



CM
2

CRN 79554-90-1
CMF C20 H23 Br2 N



CAS Registry Number
478706-05-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-dibromo-9-octyl-, polymer with 4,7-bis(5-bromo-2-thienyl)-2,1,3-benzothiadiazole and 9-octyl-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9H-carbazole (9CI) (CA INDEX NAME)

CM
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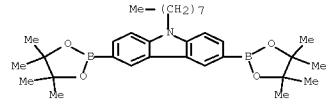
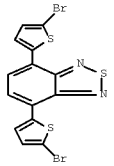
CRN 478706-06-6
CMF C52 H67 B2 N O4



CM
3

CRN 289071-67-4
CMF C14 H6 Br2 N2 S3



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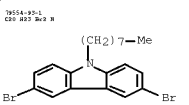


CM
2

CRN 79554-90-1
CMF C20 H23 Br2 N

OS.CITING REF COUNT: 44 THERE ARE 44 CAPLUS RECORDS THAT CITE THIS RECORD (45 CITINGS)

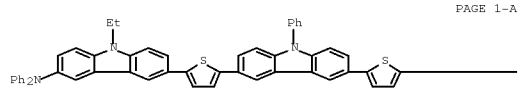
L36 ANSWER 56 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:595531 CAPLUS Full-text
Document Number
137:161221
Title
3,6-β-trisubstituted carbazoles for light emitting diodes
Author(s)
Lin, Hann Tsuen; Thomas, K. R. Justin; Tao, Yu-tai; Ko, Chung-wen
Patent Assignee/Corporate Source
Academia Sinica, Taiwan
Source
U.S. Pat. Appl. Publ., 10 pp. CODEN: USXXCO
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20020107405	A1	20020808	US 2001-990576	20011121
US 6849772	B2	20031118		
TW 297038	B	20080521	TW 2001-108449	20010409

Abstract
Compds. are described by the general formula I (Z1 and Z2 = independently selected -N(R2)R3, II, and III; A1 and A2 - independently selected S, O, NR, or CHCH; Y1, Y2 and R1-5 = independently selected aryl or heteroaryl groups; R6-11 = independently selected H, CN, alkyl, OR, NRR', COR, or C(O)OR; and R and R' = independently selected H or alkyl). Electroluminescent devices employing the compds. in hole-transporting and/or light-emitting layers are also described.
Hit Structure

CAS Registry Number
410547-41-0 CAPLUS

Chemical or Trade Name
9H-Carbazol-3-amine, 6,6'-[9-phenyl-9H-carbazole-3,6-diyl]di-5,2-thiophenediyl]bis[9-ethyl-N,N-diphenyl- (9CI) (CA INDEX NAME)

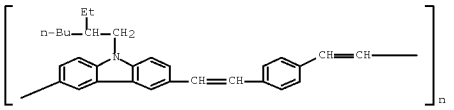


OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

PAGE 1-A

PAGE 1-B

Chemical or Trade Name
Poly[[9-(2-ethylhexyl-9H-carbazole-3,6-diyl]-1,2-ethanediyl-1,4-phenylene-1,2-ethanediyl] (9CI) (CA INDEX NAME)

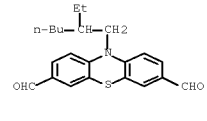


CAS Registry Number
169353-12-6 CAPLUS

Chemical or Trade Name
Phosphonic acid, [1,4-phenylenebis(methylene)]bis-, tetraethyl ester, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde and 10-(2-ethylhexyl)-10H-phenothiazine-3,7-dicarboxaldehyde (9CI) (CA INDEX NAME)

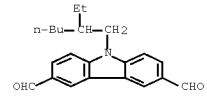
CM
1

CRN 403610-12-8
CMF C39 H55 N O8 S



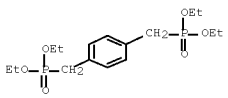
CM
2

CRN 169051-20-1
CMF C32 H35 N O2



CM
3

CRN 4546-04-7
CMF C14 H28 O6 P2

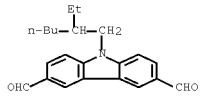


CAS Registry Number
469353-13-7 CAPLUS

Chemical or Trade Name
Phosphonic acid, [1,4-phenylenebis(methylene)]bis-, tetraethyl ester, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

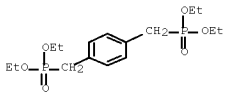
CM
1

CRN 169051-30-1
CMF C25 H25 N O2



CM
2

CRN 4544-04-7
CMF C16 H20 O4 P2

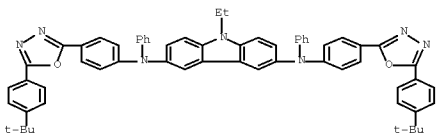


OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L38 ANSWER 58 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:597625 CAPLUS Full-text
Document Number
137:301792
Title
Green and Yellow Electroluminescent Dipolar Carbazole Derivatives: Features and Benefits of Electron-Withdrawing Segments
Author(s)
Thomas, K. R. Jeetin; Lin, Jiann T.; Tao, Yu-Tai; Chuen, Chang-Hao
Patent Assignee/Corporate Source
Institute of Chemistry, Academia Sinica, Nankang, 115, Taiwan
Source
Chemistry of Materials (2002), 14(6), 3852-3859 CODEN: CMATEX; ISSN: 0897-4756
Document Type
Journal
Language
English
Abstract
New multiply substituted carbazole derivs. containing fluorene or phenylene conjugated oxadiazole segments and quinoxaline units were obtained by Pd-catalyzed C-N coupling reactions. They are amorphous with the glass transition temperature (Tg) in the range 104-176°. The emission color of the materials varies from blue to yellow and is dependent on the nature of the electron-withdrawing segments and solvents. Two reversible 1-electron oxidns. were observed for these mols. in cyclic voltammograms, which originate from the peripheral 3,6-diarylamino units in the 3,6,9-trisubstituted derivs. and diarylamine and carbazole segments in the 2,9-disubstituted compds. Radns. originating from quinoxaline segments were also located for the mols. incorporating quinoxaline moieties. The double-layer organic light-emitting diodes fabricated using these compds. as hole-transporting/light-emitting layers and TPB or Alq3 as an electron-transporting layer emitted bluish green to yellow colors. The recombination zone is restricted in the HTL layer for the quinoxaline-containing mols. irresp. of the electron-transporting layer used and emission occurs from them. However, for the oxadiazole derivs. emission in the Alq3-based devices is either red shifted or resembles that of Alq3. Cyclic voltammetric and spectroscopic data support more pronounced electron affinity for the quinoxaline-incorporated carbazole derivs. than for the oxadiazole-tethered carbazole materials.
Hit Structure

CAS Registry Number
466062-27-3 CAPLUS

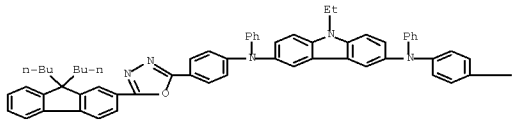
Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3,N6-bis[4-[5-[4-(1,1-dimethylethyl)phenyl]-1,3,4-oxadiazol-2-yl]phenyl]-9-ethyl-N3,N6-diphenyl- (CA INDEX NAME)



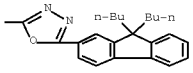
CAS Registry Number
466062-29-5 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3,N6-bis[4-[5-(9,9-dibutyl-9H-fluoren-2-yl)-1,3,4-oxadiazol-2-yl]phenyl]-9-ethyl-N3,N6-diphenyl- (CA INDEX NAME)

PAGE 1-A

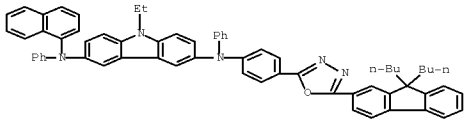


PAGE 1-B



CAS Registry Number
466062-30-8 CAPLUS

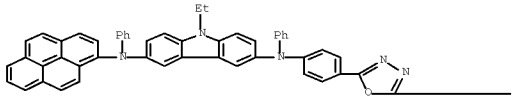
Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3-[4-[5-(9,9-dibutyl-9H-fluoren-2-yl-1,3,4-oxadiazol-2-yl]phenyl]-9-ethyl-N6-1-naphthalenyl-N3,N6-diphenyl- (CA INDEX NAME)



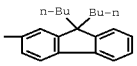
CAS Registry Number
466062-31-9 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3-[4-[5-(9,9-dibutyl-9H-fluoren-2-yl-1,3,4-oxadiazol-2-yl]phenyl]-9-ethyl-N3,N6-diphenyl-N6-1-pyrenyl- (CA INDEX NAME)

PAGE 1-A

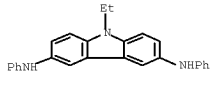


PAGE 1-B



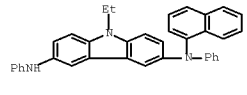
CAS Registry Number
119546-71-3 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3,N6-diphenyl- (CA INDEX NAME)



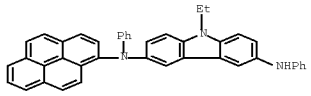
CAS Registry Number
466062-24-0 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3-1-naphthalenyl-N3,N6-diphenyl- (CA INDEX NAME)



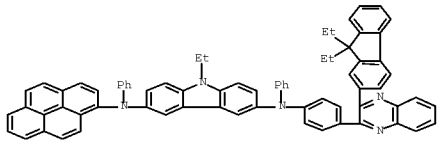
CAS Registry Number
466062-25-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3,N6-diphenyl-N3-1-pyrenyl- (CA INDEX NAME)



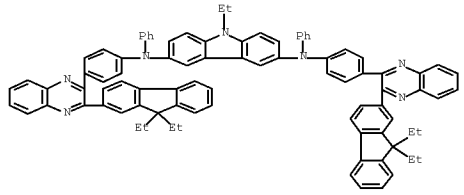
CAS Registry Number
466062-26-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3-[4-[7-(9,9-diethyl-9H-fluoren-2-yl)-3-quinoxalinyl]phenyl]-9-ethyl-N3,N6-diphenyl-N6-1-pyrenyl- (CA INDEX NAME)



CAS Registry Number
466062-37-5 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3,N6-bis[4-[3-(9,9-diethyl-9H-fluoren-2-yl)-2-quinoxalinyl]phenyl]-9-ethyl-N3,N6-diphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 43 THERE ARE 43 CAPLUS RECORDS THAT CITE THIS RECORD (44 CITINGS)

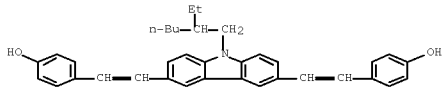
L38 ANSWER 50 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:558433 CAPLUS Full-text
Document Number
137:233002
Title
Synthesis and characterization of new poly(aryl ether)s with isolated fluorophores
Author(s)/Inventor
Hwang, Shiao-Wen; Chen, Shinn-Horng; Chen, Yun
Patent Assignee/Corporate Source
Department of Chemical Engineering, National Cheng Kung University, Tainan, 701 , Taiwan
Source
Journal of Polymer Science, Part A: Polymer Chemistry (2002), 40(14), 2215-2224 CODEN: JPACEC; ISSN: 0887-624X
Document Type
Journal
Language
English
Abstract
Four novel poly(aryl ether)s, (P1-P4) consisting of alternate isolated electron-transporting 2,2"-bis-trifluoromethyl-p-quaterphenyl for P1, P3 or 3,3"-dicyano-p-quaterphenyl for P2, P4) and hole-transporting fluorophores, (N-(2-

ethyl-hexyl)-2,6-bis(diynyl)carbazole for P1, P2 or 9,9-dihexyl-2,7-bis(diynyl)fluorene for P3, P4) were synthesized and characterized. These poly(aryl ether)s can be dissolved in organic solvents and exhibited good thermal stability with 5% weight-loss temperature above 500°C in nitrogen atmosphere. The photoluminescent (PL) spectra of the films of these polymers showed maximum peaks at around 442-452 nm. The PL spectral results revealed that the emission of polymers was dominated by the fluorophores, with longer emissive wavelength via the energy transfer from p-quaterphenyl to 3,6-bis(diynyl)carbazole or 2,7-bis(diynyl)fluorene segments. Therefore, the p-quaterphenyl segments function only as the electron-transporting/hole-blocking units in these polymers, and the other segments are the emissive centers and hole-transporting units. The HOMO and LUMO energy levels of these polymers were measured by cyclic voltammetry. The electron-donating nitrogen atom on carbazole resulted in the higher HOMO energy levels of P1 and P2 than those of P3 and P4. The single-layer light-emitting diodes [LEDs] of Al/poly(aryl ether)s (P1-P4)/ITO/ glass were fabricated. P1, P2, and P4 revealed blue electroluminescence, but P3 emitted yellow light as a result of the excimer emission.

Hit Structure

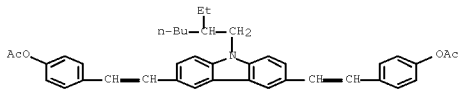
CAS Registry Number
444014-60-4 CAPLUS

Chemical or Trade Names
Phenol, 4,4'-[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]di-2,1-ethenediyl]bis- (9CI) (CA INDEX NAME)



CAS Registry Number
444015-62-5 CAPLUS

Chemical or Trade Names
Phenol, 4,4'-[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]di-2,1-ethenediyl]bis-, 1,1'-diacetate (CA INDEX NAME)



CAS Registry Number
458556-57-5 CAPLUS

Chemical or Trade Names
Phenol, 4,4'-[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]di-2,1-ethenediyl]bis-, polymer with 4,4'''-difluoro-2,5''':2',5''-bis(trifluoromethyl)-1,1':4',1'':4'',1'''-quaterphenyl (9CI) (CA INDEX NAME)

CM
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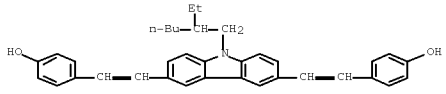
CRN 444014-60-4
CMF C36 H37 N O2



CM
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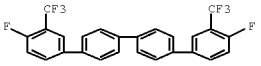
CRN 344030-17-9
CMF C26 H14 F3

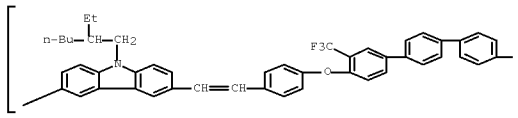


CAS Registry Number
458556-58-6 CAPLUS

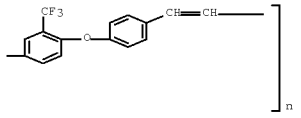
Chemical or Trade Names

Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethanediyl-1,4-phenyleneoxy[3,3'''-bis(trifluoromethyl)[1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diyl]oxy-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CAS Registry Number
458556-59-7 CAPLUS

Chemical or Trade Names
[1,1':4',1'':4'',1'''-Quaterphenyl]-3,3'''-dicarbonitrile, 4,4'''-difluoro-, polymer with 4,4'-[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]di-2,1-ethenediyl]bis[phenol] (9CI) (CA INDEX NAME)

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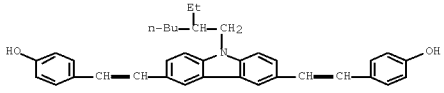
CRN 444014-60-4
CMF C36 H37 N O2



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CRN 361036-50-6
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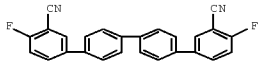
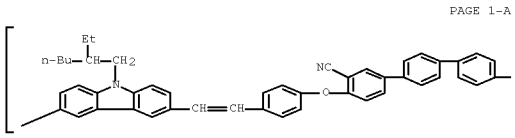


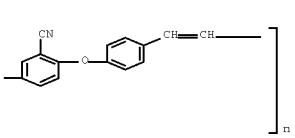
CAS Registry Number
458556-60-0 CAPLUS

Chemical or Trade Names
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethanediyl-1,4-phenyleneoxy[3,3'''-dicyano[1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diyl]oxy-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



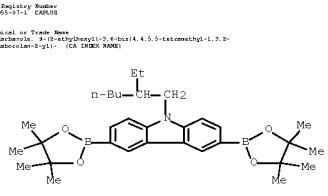
OS.CITING REF COUNT: 20 THERE ARE 20 CAPLUS RECORDS THAT CITE THIS RECORD (20 CITINGS)

L38 ANSWER 60 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:426411 CAPLUS Full-text
Document Number
137:160009
Title
Novel Electroluminescent Polymers Derived from Carbazole and Benzothiadiazole
Author(s)
Huang, Jian; Niu, Yuhua; Yang, Wei; Mo, Yueqi; Yuan, Ming; Cao, Yong
Patent Assignee(s)/Corporate Source
Institute of Polymer Optoelectronic Materials and Devices, South China University of Technology, Canton, 510640, Peop. Rep. China
Source
Macromolecules (2002), 35(16), 6060-6062 CODEN: MAMOBX; ISSN: 0024-9297
Document Type
Journal
Language
English
Abstract
In this communication, we present our results on the preparation of a novel carbazole-based copolymers, poly(4,7-(2,1,3-benzothiadiazole)-3,6-(N-(2-ethylhexyl)carbazole)) (PCzBTDZ), prepared via palladium-catalyzed Suzuki coupling reaction. Efficient energy transfer from blue light-emitting carbazole segments to the benzothiadiazole unit occurred, and efficient orange-red light emission due to the benzothiadiazole unit was observed

Hit Structure

CAS Registry Number
448965-87-1 CAPLUS

Chemical or Trade Names
9H-Carbazole, 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)- (CA INDEX NAME)



CAS Registry Number
448965-93-9 CAPLUS

Chemical or Trade Names
9H-Carbazole, 3,6-dibromo-9-(2-ethylhexyl)-, polymer with 4,7-dibromo-2,1,3-benzothiadiazole and 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9H-carbazole (9CI) (CA INDEX NAME)

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CRN 448965-87-1

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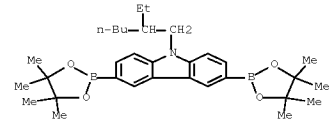

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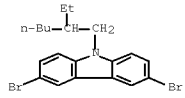
CRN 173063-52-0
CMF C20 H23 Br2 N



CM
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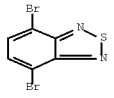
CRN 15155-41-6
CMF C6 H2 Br2 N2 S



CAS Registry Number
448965-90-6 CAPLUS

Chemical or Trade Names
9H-Carbazole, 3,6-dibromo-9-(2-ethylhexyl)-, polymer with 9-(2-ethylhexyl)-3,6-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9H-carbazole (9CI) (CA INDEX NAME)

CM
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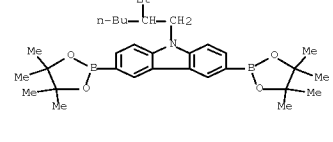
CRN 448965-87-1
CMF C30 H47 B2 N O4



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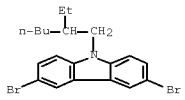
CRN 173063-52-0
CMF C20 H23 Br2 N



OS.CITING REF COUNT: 122 THERE ARE 122 CAPLUS RECORDS THAT CITE THIS RECORD (124 CITINGS)

L38 ANSWER 61 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:422162 CAPLUS Full text
Document Number
137:140662
Title
Simple synthesis, outstanding thermal stability, and tunable light-emitting and optical-limiting properties of functional hyperbranched polyarylenes.
Author(s)/Inventor
Feng, Han; Cheng, Lin; Luo, Jingdong; Xu, Kailan; Sun, Qunhui; Dong, Yuping; Salhi, Fouad; Lee, Priscilla P. S.; Chen, Junwu; Tang, Ben Zhong
Patent Assignee/Corporate Source
Department of Chemistry/Center for Display Research Institute of Nano Science and Technology and Open Laboratory of Chirotechnology of the Institute of Molecular Technology for Drug Discovery and Synthesis, Hong Kong University of Science & Technology, Clear Water Bay, Kowloon, Hong Kong, Peop. Rep. China
Source
Macromolecules (2002), 35(14), 5349-5351 CODEN: MAMOBX; ISSN: 0024-9297
Document Type
Journal
Language
English
Abstract
In this study, we successfully synthesized soluble functional hyperbranched polyarylenes in high yields by alkyne polycyclotrimerizations initiated by CpCo(CO)2 catalyst. The polyarylenes emitted UV light and limited intense optical pulses. The UV emission is of technol. value and may be utilized in the fabrication of full-color light-emitting devices.
Hit Structure

CAS Registry Number
433974-48-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-octacyl-, polymer with 1-heptyne (9CI) (CA INDEX NAME)

CM
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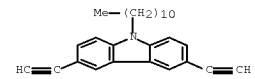
CRN 433974-56-6
CMF C27 H31 N



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2

CRN 628-71-7
CMF C7 H12

CAS Registry Number
433974-50-6 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-octacyl-, polymer with ethynylbenzene (9CI) (CA INDEX NAME)

CM
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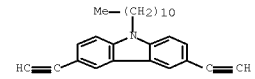
CMF C27 H31 N

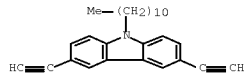


CM
2

CRN 536-74-3
CMF C8 H6

CAS Registry Number
433974-56-6 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-octacyl- (CA INDEX NAME)

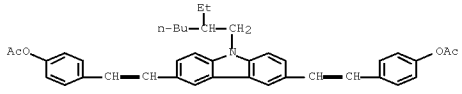


OS.CITING REF COUNT: ?? THERE ARE ?? CAPLUS RECORDS THAT CITE THIS RECORD (?? CITINGS)

L38 ANSWER 62 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:412869 CAPLUS Full text
Document Number
137:125470
Title
Photoluminescent and Electrochemical Properties of Novel Polyarylethers with Isolated Hole-Transporting Carbazole and Electron-Transporting 1,3,4-Oxadiazole Fluorophores.
Author(s)/Inventor
Hwang, Shiao-Wen; Chen, Yun
Patent Assignee/Corporate Source
Department of Chemical Engineering, National Cheng Kung University, Tainan, Taiwan
Source
Macromolecules (2002), 35(14), 5436-5443 CODEN: MAMOBX; ISSN: 0024-9297
Document Type
Journal
Language
English
Abstract
Four novel poly(arylether)s consisting of alternate isolated hole-transporting carbazole and electron-transporting 1,3,4-oxadiazole segments were synthesized from the nucleophilic displacement reaction of bis(fluoride) monomers with bis(phenol) monomers. These poly(aryl ether)s are soluble in common organic solvents and exhibit good thermal stability with 5% weight loss temperature above 400 °C under a nitrogen atmospheric. The photoluminescent (PL) spectra and quantum yields of these polymers are dependent on the composition of the two isolated fluorophores. The formation of exciplex in P3 was observed in the film and solution state and resulted in the lower quantum yield. The quantum yields of P4 in solns. can increase from 0.04 of P3 to 0.36, due to the dilute effect, by introducing the inert bisphenol A segments. However, the PL spectra of P4 only showed a little blue-shift in the film state. This means the interchain exciplex still dominated the emission of polymeric films. The HOMO and LUMO energy levels of these polymers have been measured from cyclic voltammetry. All the observations directly proved that the oxidation in polymers started at the hole-transporting segments. Both the electron and hole affinities of these polymers could be enhanced simultaneously due to the introduction of isolated hole-transporting carbazole and electron-transporting 1,3,4-oxadiazole segments.
Hit Structure

CAS Registry Number
444014-93-5 CAPLUS

Chemical or Trade Name
Phenol, 4,4'-[(9-ethylhexyl-9H-carbazole-3,6-diyl)di-2,1-ethenediyl]bis-, 1,1'-diacetate (CA INDEX NAME)



CAS Registry Number
444014-89-5 CAPLUS

Chemical or Trade Name
Phenol, 4,4'-[(9-ethylhexyl-9H-carbazole-3,6-diyl)di-2,1-ethenediyl]bis-, polymer with 2,5-bis(4-fluorophenyl)-1,3,4-oxadiazole (CA INDEX NAME)

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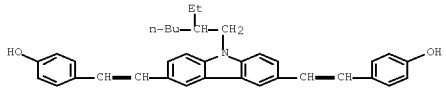
CRN 444014-88-4
CMF C36 H37 N O2



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CRN 324-01-3
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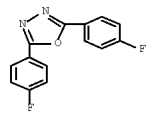
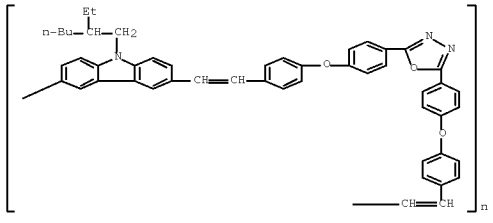


CAS Registry Number
444014-92-4 CAPLUS

Chemical or Trade Name
Poly[(9-ethylhexyl-9H-carbazole-3,6-diyl-1,2-ethenediyl-1,4-phenyleneoxy-1,4-phenylene-1,3,4-oxadiazole-1,4-phenyleneoxy-1,4-phenylene-1,2-ethenediyl)] (CA INDEX NAME)



CAS Registry Number
444014-94-6 CAPLUS

Chemical or Trade Name
Phenol, 4,4'-[(9-ethylhexyl-9H-carbazole-3,6-diyl)di-2,1-ethenediyl]bis-, polymer with 3,3'-[2,5-bis(hexyloxy)-1,4-phenylene]bis[5-(4-fluorophenyl)-1,3,4-oxadiazole] (9CI) (CA INDEX NAME)

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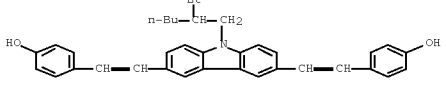
CRN 444014-88-4
CMF C36 H37 N O2



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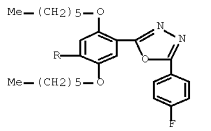
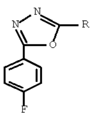
CRN 444014-83-9
CMF C34 H36 F2 N4 O4

PAGE 1-A



PAGE 2-A



CAS Registry Number
444014-96-4 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenyleneoxy-1,4-phenylene-1,3,4-oxadiazole-2,5-diyl[2,5-bis(hexyloxy)-1,4-phenylene]-1,3,4-oxadiazole-2,5-diyl-1,4-phenyleneoxy-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

CAS Registry Number
444014-98-6 CAPLUS

Chemical or Trade Name
Phenol, 4,4'-[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]di-2,1-ethenediyl]bis-, polymer with 2,2'-[2,5-bis(hexyloxy)-1,4-phenylene]bis[5-(4-fluorophenyl)-1,3,4-oxadiazole] and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

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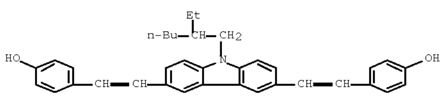
CRN 444014-88-4
CMF C36 H37 N O2



CM
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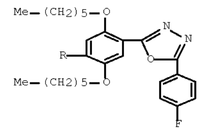
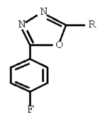
CRN 444014-83-9
CMF C34 H36 F2 N4 O4

PAGE 1-A



PAGE 2-A



CM
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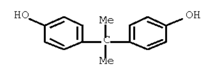
CRN 80-05-7
CMF C15 H16 O2



OS.CITING REF COUNT: 70 THERE ARE 70 CAPLUS RECORDS THAT CITE THIS RECORD (71 CITINGS)

L38 ANSWER 63 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2002:373801 CAPLUS Full-text

Document Number
137:176740

Title
Composites of C60 based poly(phenylene vinylene) dyad and conjugated polymer for polymer light- emitting devices

Author/Inventor
Wang, Shu; Yang, Junlin; Li, Yuliang; Lin, Hongzhen; Guo, Zhixin; Xiao, Shengxiong; Shi, Zhiqiang; Zhu, Daoben; Woo, Hyung-Suk; Carroll, David L.; Kee, In-Seo; Lee, Ji-Hoon

Patent Assignee/Corporate Source
Center of Molecular Science, Institute of Chemistry, Chinese Academic of Sciences, Beijing, 100080, Peop. Rep. China

Source
Applied Physics Letters (2002), 80(20), 3847-3849 CODEN: APPLAB; ISSN: 0003-6951

Document Type
Journal

Language
English

Abstract
A C60-based poly(phenylene vinylene) (PPV) dyad poly{[2,5-di-pentoxyl-phenylene)-4-diylvinylene-3,6-[9-(1-azafulleroid- propyl)-carbazolenevinylene]} (PPV-AFCAR) and an emissive conjugated polymer poly{1,4[2-(3,7-dimethyloctyloxy)-3,5,6-trimethoxy]phenylene vinylene} (POMPV) were prepared to study the role of [60]fullerene in conjugated polymer composites. Multilayer organic light- emitting devices with the configuration of In Sn oxide/poly(3,4-ethylenedioxythiophene):poly(styrene sulfonate) (PEDOT:PSS)/blends/2-(4-biphenylyl)-5-(4-tert-butylphenyl)-1,3,4- oxadiazole(Bu-PBD)/LiF/Al were fabricated using PPV-AFCAR as a dopant and POMPV as an emissive material.

Hit Structure

CAS Registry Number
332865-42-6 CAPLUS

Chemical or Trade Name
1,4-Benzenediacetonitrile, 2,5-bis(pentyloxy)-, polymer with 9-(3-azidopropyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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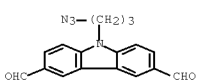
CRN 332865-09-5
CMF C17 H14 N4 O2



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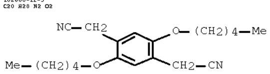
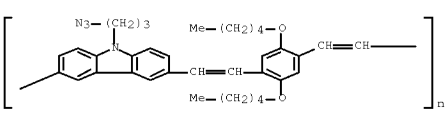
CRN 102600-11-3
CMF C20 H28 N2 O2



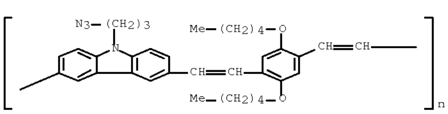
CAS Registry Number
332865-46-0 CAPLUS

Chemical or Trade Name
Poly[[9-(3-azidopropyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl[2,5-bis(pentyloxy)-1,4-phenylene]-1,2-ethenediyl] (9CI) (CA INDEX NAME)



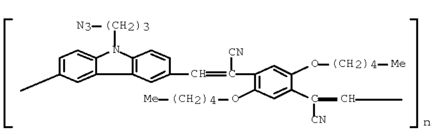
CAS Registry Number
332865-46-0 CAPLUS

Chemical or Trade Name
Poly[[9-(3-azidopropyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl[2,5-bis(pentyloxy)-1,4-phenylene]-1,2-ethenediyl] (9CI) (CA INDEX NAME)



CAS Registry Number
332865-51-7 CAPLUS

Chemical or Trade Name
Poly[[9-(3-azidopropyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)[2,5-bis(pentyloxy)-1,4-phenylene](1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 15 THERE ARE 15 CAPLUS RECORDS THAT CITE THIS RECORD (15 CITINGS)

L38 ANSWER 64 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2002:299600 CAPLUS Full-text

Document Number
137:93475

Title
Light-emitting carbazole derivatives for electroluminescent materials

Author/Inventor
Lin, Jiann Tsuen; Thomas, K. R. Justin; Tao, Yu-Tai; Ko, Chung-Wen

Patent Assignee/Corporate Source
Institute of Chemistry, Academia Sinica, Taipei, 115, Taiwan

Source
Proceedings of SPIE-The International Society for Optical Engineering (2002), 4464(Organic Light-Emitting Materials and Devices V), 307-316 CODEN: PSISDG; ISSN: 0277-786X

Document Type
Journal

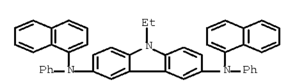
Language
English

Abstract
Amorphous carbazole derivs. containing peripheral diarylamines at the 3- and 6-positions and an Et or aryl substituent at the 9-position of the carbazole moiety were synthesized. These new carbazole compds. (carbs) possess high glass transition temps. (Tg: 120- 194 degree(s)C) and high thermal decomposition temps. (Td'450 degree(s)C). The compds. are weakly to moderately luminescent with the emission wavelength ranging from green to blue. Two types of light-emitting diodes (LED) were constructed from carb:(I)ITO/carb/TPBI/Mg:Ag and (II)ITO/carb/Alq3/Mg:Ag, where TPBI and Alq3 are 1,3,5-tris(N-phenylbenzimidazol-2-yl)benzene and tris(8-hydroxyquinoline) Al, resp. In type I devices the carb functions as the hole-transporting as well as emitting material. In type II devices either carb and/or Alq3 is the light emitting material. Several green light-emitting devices exhibit exceptional maximum brightness and the phys. performance is superior to those of typical green-light-emitting devices of the structure ITO/diamine/Alq3/Mg:Ag. Relation between the LUMO of the carb and the performance of the light-emitting diode is discussed.

Hit Structure

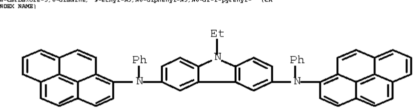
CAS Registry Number
144726-91-0 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3,N6-di-1-naphthalenyl-N3,N6-diphenyl- (CA INDEX NAME)



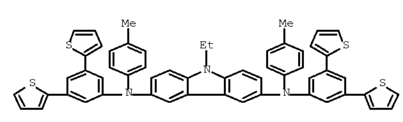
CAS Registry Number
373390-02-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3,N6-diphenyl-N3,N6-di-1-pyrenyl- (CA INDEX NAME)



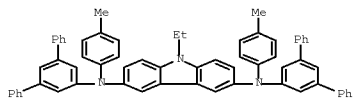
CAS Registry Number
441351-18-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3,N6-bis(3,5-di-2-thienylphenyl)-9-ethyl-N3,N6-bis(4-methylphenyl)- (CA INDEX NAME)



CAS Registry Number
441351-19-5 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N,N'-bis(4-methylphenyl)-N,N'-bis([1,1':3',1''-terphenyl]-5'-yl)- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 65 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:275817 CAPLUS Fulltext
Document Number
137:407271
Title
Novel blue light-emitting PPV-based copolymer containing triazole and carbazole units
Author(Inventor
Liu, Zi; Wang, LiXiang; Jing, Xia Bin; Wang, Fo Song
Patent Assignee/Corporate Source
The State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, 130022, Peop. Rep. China
Source
Chinese Chemical Letters (2002), 13(3), 256-257 CODEN: CCLEE7; ISSN: 1001-8417
Document Type
Journal
Language
English
Abstract
A novel alternating conjugated copolymer containing triazole and carbazole units was synthesized by the Wittig reaction. The resulting bipolar conjugated polymer emits a pure light with good thermal stability, which is a promising candidate for polymer light-emitting display.
Hit Structure

CAS Registry Number
389047-65-6 CAPLUS

Chemical or Trade Name
Phosphonium, [[4-phenyl-4H-1,2,4-triazole-3,5-diyl]bis(4,1-phenyleneethylene)]bis[tributyl-, dichloride, polymer with 9-octyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

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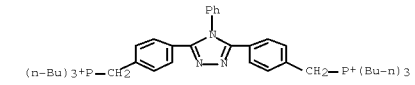
CRN 389047-64-7
CMF C66 H71 N3 P2 . 2 Cl



2 Cl-

CM
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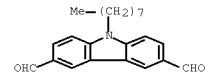
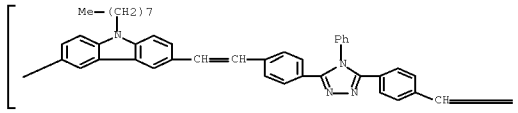
CRN 319018-43-4
CMF C29 H25 N O2

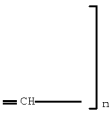


CAS Registry Number
389047-66-8 CAPLUS

Chemical or Trade Name
Poly[9-octyl-9H-carbazole-3,6-diyl-1,2-ethenediyl-1,4-phenylene(4-phenyl-4H-1,2,4-triazole-3,5-diyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



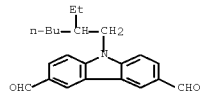


OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L38 ANSWER 66 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:255833 CAPLUS Fulltext
Document Number
137:47856
Title
Synthesis and properties of photoluminescent polymers bearing electron-facilitating oxadiazole derivative side groups
Author(Inventor
Kim, J. J.; Kim, K.-S.; Baek, S.; Kim, H. C.; Ree, M.
Patent Assignee/Corporate Source
Department of Chemistry, Center for Integrated Molecular Systems, BK21 Functional Polymer Thin Film Group, Polymer Research Institute, Pohang University of Science and Technology, Pohang, 790-784, S. Korea
Source
Journal of Polymer Science, Part A: Polymer Chemistry (2002), 40(8), 1173-1183 CODEN: JPACEC; ISSN: 0887624X
Document Type
Journal
Language
English
Abstract
Poly(p-divinylenephenylene) derivs. bearing fluorene and carbazole units in the main chain and 5-phenyl-1,3,4-oxadiazole moieties as side groups were prepared by the polycondensation of a newly synthesized monomer, β-(5'-phenyl-2',5'-oxadiazole-2'-yl)-4-xylene(bis(triphenylphosphonium bromide) (OXAD), with 9,9-dioctylfluorene-2,7-dicarbaldehyde (DEFDA) and 9-(2-ethylhexyl)carbazole-3,6-dicarbaldehyde (EHCDA), which gave DEFDA-OXAD and EHCDA-OXAD. Analogs of these polymers without the side groups were also synthesized by the reaction of 1,4-xylene bis(tri-Ph phosphonium bromide) (PXYL) with the dicarbaldehydes, which gave DEFDA-PXYL and EHCDA-PXYL. All the synthesized polymers are soluble in organic solvents, giving films of good quality. The polymers are stable beyond 270°. They emit blue and blue-green light, and their quantum yields are 38-76% in solution and 1-24% in film, depending on the fluorene and carbazole units as well as the side groups. In particular, the OXAD-based polymers contain hole-facilitating backbones and electron-facilitating side groups, perhaps allowing these polymers to transport both holes and electrons. Overall, the synthesized polymers are potential candidates for the fabrication of light-emitting devices.
Hit Structure

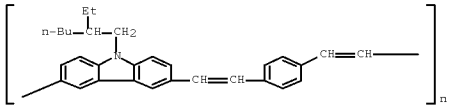
CAS Registry Number
169051-20-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)



CAS Registry Number
265126-14-5 CAPLUS

Chemical or Trade Name
Poly[1,9-(2-ethylhexyl)-9H-carbazole-3,6-diyl-1,2-ethenediyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)



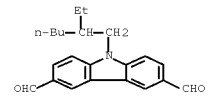
CAS Registry Number
405107-99-5 CAPLUS

Chemical or Trade Name
Phosphonium, [1,4-phenylenebis(methylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

PAGE 1-B

CM
1

CRN 169051-20-1
CMF C29 H25 N O2



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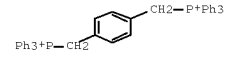
CRN 40017-69-6
CMF C44 H38 P2 . 2 Br



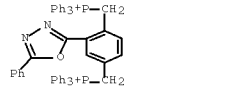
2 Br-

CAS Registry Number
437722-44-6 CAPLUS

Chemical or Trade Name
Phosphonium, [[5-(5-phenyl-1,2,4-oxadiazol-2-yl)-1,4-phenylene]bis(methylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

CRN 437722-33-3
CMF C52 H43 N2 O P2 . 2 Br



2 Br-

CM
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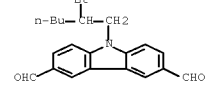
CRN 169051-20-1
CMF C29 H25 N O2



OS.CITING REF COUNT: 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)

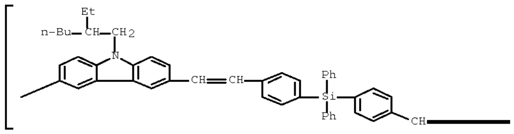
L38 ANSWER 67 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:226675 CAPLUS Fulltext
Document Number

137:70178
Title
Novel silicon-based alternating copolymers and their metal-chelated complexes: Synthesis, photophysical properties, and ELD application
Author/Inventor
Kim, Hwan Kyu; Baek, Nam Seob; Paik, Kyung Lim
Patent Assignee/Corporate Source
National Creative Initiative Center Smart Light-Harvesting Materials, Dep. Polymer Sci. Eng., Hannam Univ., Taejon, 306-791, S. Korea
Source
Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2002), 43(1), 111-112 CODEN: ACPPAY; ISSN: 0032-3934
Document Type
Journal; (computer optical disk)
Language
English
Abstract
A new class of Si-based alternating copolymers containing heteroarom. units and metal-chelated complexes was synthesized for blue and red electroluminescent (EL) devices, resp. The synthesis of Si-based alternating copolymers with relatively high polymer yield was performed using the known Heck reaction. The carbazole or fluorene units into the SiHMOXD with various molar ratios to overcome the poor stability of a resulting copolymer, arising from the rigid structure of an oxadiazole unit, and to improve the quantum efficiency and luminescent properties. The unusual EL properties were from the intra-chain interaction and not from inter-chain interaction. Novel Si-based copolymers containing Ru(II)-chelated complexes or lanthanide(III)-chelated complexes were prepared for red EL devices. The Si-based copolymers containing Ru(II)-chelated metal complexes exhibited strong band around 261-289 nm for ligand units and strong absorption band around 386-392 for π-conjugated backbones. Si-based copolymers containing Eu(III)-chelated complexes were also developed to improve the processability, the carrier mobility and quantum efficiency of red EL devices.
Hit Structure

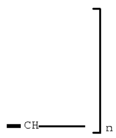
CAS Registry Number
189575-99-3 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(diphenylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A

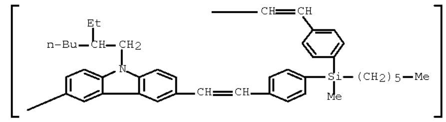


PAGE 1-B



CAS Registry Number
189576-01-0 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(hexylmethylsilylene)-1,4-phenylene-1,2-ethenediyl] (CA INDEX NAME)



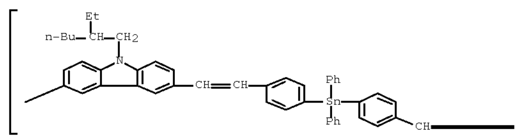
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 68 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:229652 CAPLUS Full-text
Document Number
137:20708
Title
Exploratory synthesis and luminescent property of novel π-conjugated tin-based alternating copolymers
Author/Inventor
Baek, N. S.; Kim, H. K.; Chae, E. H.; Kim, B. H.; Lee, J-H.
Patent Assignee/Corporate Source
National Creative Initiative Center Smar Light-Harvesting Materials, Dep. Polymer Sci. Eng., Hannam Univ., Taejon, 306-791, S. Korea
Source
Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2002), 43(1), 75-76 CODEN: ACPPAY; ISSN: 0032-3934
Document Type
Journal; (computer optical disk)
Language
English
Abstract
Tin-based copolymers with a uniform π-conjugated segment were synthesized using the Heck reaction. The incorporation of organotin units with aromatic groups on Sn into π-conjugated systems resulted in improved processability and provided for interrupted π-conjugation length. The resulting polymers were highly soluble in common organic solvents and could be spin-cast onto various substrates to obtain highly transparent homogeneous thin films. The glass transition temperature of the conjugated Sn polymers is 70 to 90°. The UV-visible absorption spectral band of the polymers is found at 350 to 394 nm in chloroform solution and film, and the photoluminescence (PL) spectra exhibited blue emissive color at 470-502 nm. Multi-layer LEDs of ITO/PEDOT/ Sn Polymer/Ca/Al were fabricated. The EL devices exhibited especially low turn-on voltage of less than 5 V, as determined from the I-V curve and strong blue EL at 470 nm. The EL devices with blends of polymers and PVK showed dramatically improved EL efficiency, brightness, and color purity.
Hit Structure

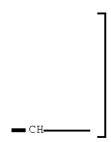
CAS Registry Number
434952-98-4 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(diphenylstannylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

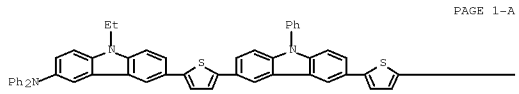


L38 ANSWER 69 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:152154 CAPLUS Full-text
Document Number
136:316630
Title
New Star-Shaped Luminescent Triarylamines: Synthesis, Thermal, Photophysical, and Electroluminescent Characteristics
Author/Inventor
Thomas, K. R. Justin; Lin, Jiann T.; Tao, Yu-Tai; Ko, Chung-Wen
Patent Assignee/Corporate Source
Institute of Chemistry, Academia Sinica, Taipei, 115, Taiwan
Source
Chemistry of Materials (2002), 14(3), 1354-1361 CODEN: CMATEX; ISSN: 0897-4756
Document Type
Journal
Language
English
Abstract
3,6-Disubstituted carbazole and 1,3,5-trisubstituted benzene derivs. incorporating thienyl aromatic (Ph, fluorenyl, and carbazolyl) conjugation and end-capped diphenylamine were synthesized by iterative C-N and C-C coupling procedures. The carbazole derivs. emit blue light and the star-shaped benzene derivs. emit either blue or bluish green color depending on the conjugation segment. In general, they possess high glass transition temps. (>120°) and decomposition temps. (>520°). Double-layer organic light-emitting devices were successfully fabricated using these novel mols. as hole-transporting and emitting materials. Devices of the configuration ITO/HTM/TPBI/Mg:Ag display blue to green emission from the HTM layer while in the devices of the configuration ITO/HTM/Alq3/Mg:Ag, a typical green emission from the Alq3 layer was observed
Hit Structure

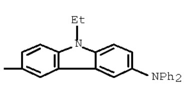
CAS Registry Number
410547-41-0 CAPLUS

Chemical or Trade Name
9H-Carbazol-3-amine, 6,6'-[(9-phenyl-9H-carbazole-3,6-diyl)di-5,2-thiophenediyl]bis[9-ethyl-N,N-diphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

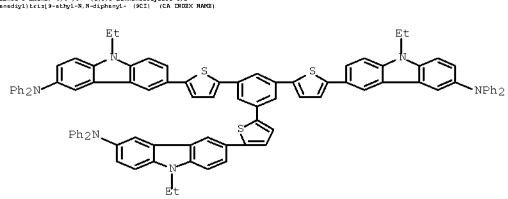


PAGE 1-B



CAS Registry Number
410547-47-6 CAPLUS

Chemical or Trade Name
9H-Carbazol-3-amine, 6,6',6''-(1,3,5-benzenetriyltri-5,2-thiophenediyl)tris[9-ethyl-N,N-diphenyl- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 49 THERE ARE 49 CAPLUS RECORDS THAT CITE THIS RECORD (49 CITINGS)

L38 ANSWER 70 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:27767 CAPLUS Full-text
Document Number
136:93301
Title
Organic electroluminescent device employing aminostyryl compound
Author/Inventor
Hashimoto, Mitsuru
Patent Assignee/Corporate Source
Matsushita Electric Industrial Co., Ltd., Japan
Source
Jpn. Kokai Tokkyo Koho, 25 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

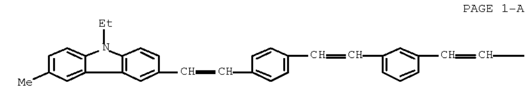
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002008864	A	20020111	JP 2000-188928	20000623

Abstract
An organic electroluminescent device employs an aminostyryl compound Ar1[C(R1):C(R2)Ar2C(R3):C(R4)Ar3NR5R6]n [Ar1 = divalent or tetravalent (substituted) aromatic (heterocyclic) hydrocarbon residue; Ar2-3 = divalent (substituted) aromatic (heterocyclic) hydrocarbon residue; R1-6 = (substituted) aromatic (heterocyclic) hydrocarbon residue, (substituted) alkyl, H; R5 and R6 may form a 5-7 membered ring; n = 1-4]. The device provides high luminous light at low voltage and shows excellent stability.
Hit Structure

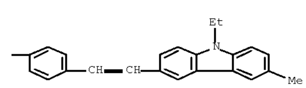
CAS Registry Number
387352-52-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,3'-[1,3-phenylenebis(2,1-ethenediyl-4,1-phenylene-2,1-ethenediyl)]bis[9-ethyl-6-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



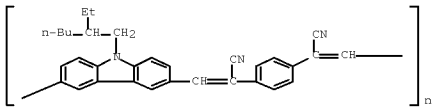
PAGE 1-B



L38 ANSWER 71 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2002:8819 CAPLUS Full-text
Document Number
136:207053
Title
Characteristics of organic light- emitting diodes using PECCP Langmuir-Blodgett film as an emissive layer
Author/Inventor
Lee, Ho-Sik; Kim, Tae Wan; Lee, Won-Jae; Park, Jong-Wook; Kang, Dou-Yol
Patent Assignee/Corporate Source
Dept. of Electrical Eng., Hongik University, Seoul, 121-791, S. Korea
Source
Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (2001), 371, 451-454 CODEN: MCLCE9; ISSN: 1058-725X
Document Type
Journal
Language
English
Abstract
Green light-emitting material, poly(3,6-N-2-ethylhexyl carbazolylcyanotere-phthalidene)(PECCP) has been synthesized which has an electron-donor and electron-acceptor moiety in a repeated unit of polymer. Organic light-emitting diodes were made with PECCP Langmuir-Blodgett(LB) films in a sandwich structure between indium-tin-oxide(ITO) and aluminum electrodes. Z-type LB films were manufactured using a Kuhn type to use for an emissive layer. Green photoluminescent and electroluminescent spectra at λmax = 536 nm corresponding to 2.31 eV have been observed
Hit Structure

CAS Registry Number
192446-73-4 CAPLUS

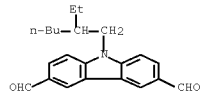
Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)-1,4-phenylene(1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)



L36 ANSWER 72 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:610819 CAPLUS Full-text
Document Number
136:353014
Title
Synthesis and properties of novel electroluminescent oligomers containing carbazolylene-vinylene-sulfonylene units for a light-emitting diode
Author(Inventor
Jung, Ho Kuk; Lee, Chang-Lyoul; Lee, Jin Kyun; Kim, Jai Kyeong; Park, Soo Young; Kim, Jang-Joo
Patent Assignee/Corporate Source
School of Materials Science and Engineering, Seoul National University, Shilim-dong, Kwanak-gu, Seoul, 151-742, S. Korea
Source
Thin Solid Films (2001), 401(1,2), 111-117 CODEN: THSFAP; ISSN: 0040-6090
Document Type
Journal
Language
English
Abstract
As a new class of spin-coatable electroluminescent oligomers, oligo(N-ethylhexyl-3,6-carbazolylenevinylene-alt-4,4'-diphenylvinylene- sulfone) (P1) and oligo(N-ethylhexyl-3,6-carbazolylvinylene-p- phenylenevinylene) (P2) were synthesized through Wittig polycondensation of N-(2-ethylhexyl)-3,6-diformylcarbazole with the diphosphonium salts of bis(bromomethyl)-p-phenylsulfone and α,α'-dibromo-p-xylene, resp. These electroluminescent (EL) oligomers were highly soluble in common organic solvents, forming excellent-quality optical films by spin coating. Films obtained were very transparent, tough, and smooth with initial decomposition temperature of ca. 400 °C. Greenish-blue photoluminescence (PL) and electroluminescence (EL) was obtained for both oligomer films. It was found that the relative EL quantum efficiency of single-layer P1 device was five-fold higher than that of the P2 device, which was attributed to the lowered mol. energy levels of the former due to the presence of the sulfonylene group.
Hit Structure

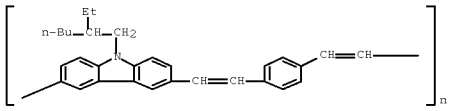
CAS Registry Number
169051-20-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)



CAS Registry Number
365126-14-5 CAPLUS

Chemical or Trade Name
Poly[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl-1,2-ethenediyl-1,4-phenylene-
1,2-ethenediyl] (9CI) (CA INDEX NAME)



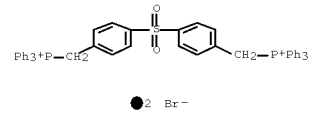
CAS Registry Number
405107-97-7 CAPLUS

Chemical or Trade Name
Phosphonium, [sulfonylbis(4,1-phenyleneethylene)]bis[triphenyl-,
dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde
(9CI) (CA INDEX NAME)

CM
1

CRN 346544-30-9
CMF C50 H42 O3 P2 S . 2 Br

OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)



2 Br-

CM
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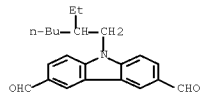
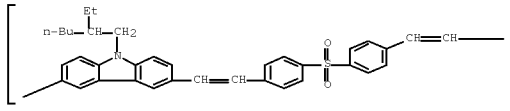
CRN 169051-20-1
CMF C29 H25 N O2



CAS Registry Number
405107-99-5 CAPLUS

Chemical or Trade Name
Poly[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl-1,2-ethenediyl-1,4-
phenylenesulfonyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

n

CAS Registry Number
405107-99-5 CAPLUS

Chemical or Trade Name
Phosphonium, [1,4-phenylenebis(methylene)]bis[triphenyl-, dibromide,
polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA
INDEX NAME)

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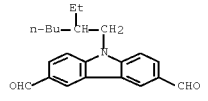
CRN 169051-20-1
CMF C29 H25 N O2



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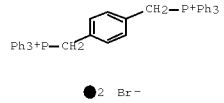
CRN 40117-03-6
CMF C44 H30 P2 . 2 Br

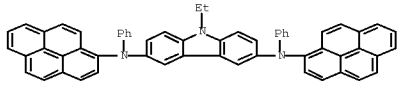


2 Br-

L36 ANSWER 73 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:869365 CAPLUS Full-text
Document Number
136:125727
Title
Light-Emitting Diodes Based on a Carbazole-Derivatized Dopant: Origin of Dopant Excitation as a Function of the Device Structure
Author(Inventor
Ho, Chung-Wen; Tao, Yu-Tai; Lin, Jiann T.; Thomas, K. R. Justin
Patent Assignee/Corporate Source
Institute of Chemistry, Academia Sinica, Taipei, 115, Taiwan
Source
Chemistry of Materials (2002), 14(1), 357-361 CODEN: CMATEX; ISSN: 0897-4756
Document Type
Journal
Language
English
Abstract
Efficient green-emitting OLEDs were fabricated by using the carbazole derivative 9-ethyl-N,N'-diphenyl-N,N'-dipyren-1-yl-9H-carbazole-3,6- diamine (C-EI) as a dopant in different layers in a multilayered structure. Depending on the energy levels of the various layers involved, dopant emission can be realized through either energy transfer or the carrier trapping mechanism. By doping into the CBP layer of the device ITO/NPB (40 nm)/CBP:8% C-EI (20 nm)/TPBI (40 nm)/Mg-Ag (50 nm)/Ag(100 nm), a maximum luminance of 48 300 cd/m2, a maximum quantum efficiency of 3.90%, and a maximum power efficiency of 5.28 lm/W can be achieved.
Hit Structure

CAS Registry Number
373390-03-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3,N6-diphenyl-N3,N6-di-1-pyrenyl- (CA
INDEX NAME)

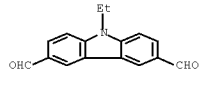


OS.CITING REF COUNT: 42 THERE ARE 42 CAPLUS RECORDS THAT CITE THIS RECORD (42 CITINGS)

L36 ANSWER 74 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:869360 CAPLUS Full-text
Document Number
136:86467
Title
Effect of side chain alkyl length on the electroluminescence characteristics of carbazole-based light-emitting polymers
Author(Inventor
Chao, Ching-Shiun; Whang, Wha-Tzong; Hung, Chin-Hsien
Patent Assignee/Corporate Source
Department of Materials Science & Engineering, National Chiao Tung University, Hsin Chu, 300, Taiwan
Source
Macromolecular Chemistry and Physics (2001), 202(14), 2864-2871 CODEN: MCHPES; ISSN: 1022-1352
Document Type
Journal
Language
English
Abstract
Three carbazole-based copolymers with different long side chains were synthesized using the Wittig reaction. These three copolymers and model compound were characterized by NMR spectroscopy to determine the cis/trans ratio. The cis/trans ratios decrease with the side chain length due to the variation in the degree of steric hindrance in the Wittig reaction. They affect the electroluminescence (EL) characteristics of the carbazole-based light emitting polymers. As the length of the side chain increases, the wavelength of the emitted light increases proportionally whereas a decrease in the threshold voltages, 5.2, 4.8, 2.5 V was observed. However, EL intensity at same applied voltage increases with the length of the side chain. The energy levels of these three copolymers were also studied to account for the phenomenon.
Hit Structure

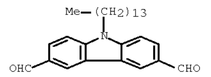
CAS Registry Number
70397-46-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-ethyl- (CA INDEX NAME)



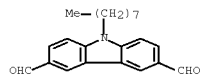
CAS Registry Number
163375-89-0 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-tetradecyl- (CA INDEX NAME)



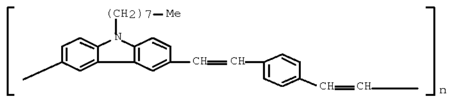
CAS Registry Number
319018-43-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-octyl- (CA INDEX NAME)



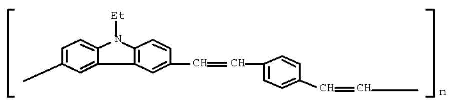
CAS Registry Number
79591-04-1 CAPLUS

Chemical or Trade Name
Poly[(9-octyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene-1,2-ethenediyl] (CA INDEX NAME)



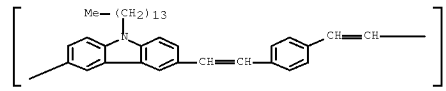
CAS Registry Number
99527-64-7 CAPLUS

Chemical or Trade Name
Poly[(9-ethyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)



CAS Registry Number
386211-16-1 CAPLUS

Chemical or Trade Name
Poly[(9-tetradecyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)



CAS Registry Number
386211-17-2 CAPLUS

Chemical or Trade Name
Phosphonium, [1,4-phenylenebis(methylene)]bis[triphenyl-, dichloride, polymer with 9-ethyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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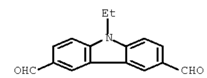
CRN 70207-46-4
CMF C16 H13 N O2



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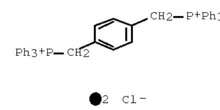
CRN 1519-47-7
CMF C44 H38 P2 . 2 Cl



CAS Registry Number
386211-18-3 CAPLUS

Chemical or Trade Name
Phosphonium, [1,4-phenylenebis(methylene)]bis[triphenyl-, dichloride, polymer with 9-octyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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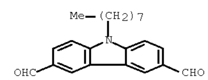
CRN 319018-43-4
CMF C22 H25 N O2



CM
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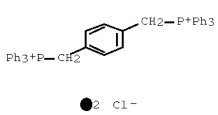
CRN 1519-47-7
CMF C44 H38 P2 . 2 Cl



CAS Registry Number
386211-19-4 CAPLUS

Chemical or Trade Name
Phosphonium, [1,4-phenylenebis(methylene)]bis[triphenyl-, dichloride, polymer with 9-tetradecyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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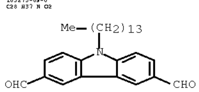
CRN 183275-89-0
CMF C28 H37 N O2



CM
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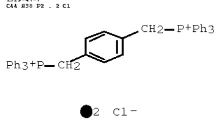
CRN 1519-47-7
CMF C44 H38 P2 . 2 Cl



OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)

L38 ANSWER 75 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2001:866148 CAPLUS Full-text

Document Number
136:135116

Title
Synthesis and luminescent properties of blue light emitting polymers containing both hole and electron transporting units

Author/Inventor
Ahn, Taek; Shim, Hong-Ku

Patent Assignee/Corporate Source
Center for Advanced Functional Polymers, Department of Chemistry and School of Molecular Science (BK21), Korea Advanced Institute of Science and Technology, Taejon, 305-701, S. Korea

Source
Macromolecular Chemistry and Physics (2001), 202(16), 3180-3188 CODEN: MCHPES; ISSN: 1022-1352

Document Type
Journal

Language
English

Abstract
Poly[(oxy-4,4'-octa-fluoro biphenyl-oxy)-1,4-phenylenevinylene-2-methoxy-5- (2-ethylhexyl-oxy)-1,4-phenylenevinylene-1,4-phenylene], POFB-MEH-PPV, poly[(oxy-4,4'-octa-fluoro biphenyl-oxy)-1,4-phenylenevinylene-9,9-dihexyl- 2,7-fluorene diyl-vinylene-1,4-phenylene], POFB-PF, and poly[(oxy-4,4'-octa-fluoro biphenyl-oxy)-1,4-phenylenevinylene-N- ethylhexyl-3,6-carbazole vinylene-1,4-phenylene], POFB-PK, were synthesized by the well-known Wittig condensation polymerization. We incorporated the high electron affinity (octa-fluoro biphenyl) and hole-transporting (carbazole, fluorene, and dialkoxy phenyl) units into the conjugated main chain. The conjugation lengths are limited to the blue-emission region by ether linkage. The resulting polymers were completely soluble in common organic solvents such as chloroform, 1,2-dichloroethane, and cyclohexanone, and exhibited good thermal stability up to 300°C. The synthesized polymers showed UV-visible absorbance and photoluminescence (PL) in the ranges of 350-385 nm and 460-490 nm, resp. The fluorene or carbazole containing POFB-PF and POFB-PK showed blue photoluminescence peaks at 470 and 460 nm, resp. The single-layer light-emitting diode was fabricated in a configuration of ITO (indium-tin oxide)/polymer/Al. Electroluminescence (EL) emission of POFB-PF and POFB-PK were shown at 475 and 458 nm, resp., corresponding to the pure blue emissions. And, a dialkoxy-Ph containing POFB-MEH-PPV showed greenish blue light at 494 nm. But, LED devices from synthesized polymers showed poor device performance and high turn on voltage. So, we fabricated light- emitting diodes (LEDs) from blend polymers composed of poly[2-methoxy-5-(2-ethylhexyl-oxy)-1,4-phenylenevinylene] (MEH-PPV) and POFB-MEH-PPV (POFB-PF or POFB-PK) as the emitting layers. The EL emission maxima of each blend polymers were in the range of 573-591 nm, which indicates that the emission is mainly due to MEH-PPV and POFB-MEH-PPV (POFB-PF or POFB-PK) contributes to the enhancement of the luminescence. And each blend polymers exhibited higher EL quantum efficiency compared with MEH-PPV at the same c.d.

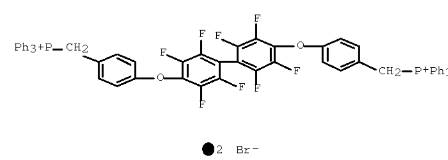
Hit Structure

CAS Registry Number
352354-14-4 CAPLUS

Chemical or Trade Name
Phosphonium, [(2,2',3,3',5,5',6,6'-octafluoro[1,1'-biphenyl]-4,4'-diyl)bis(oxy-4,1-phenylenemethylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

CRN 352354-13-3
CMF C62 H42 F8 O2 P2 . 2 Br



CM
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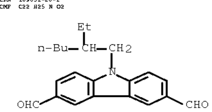
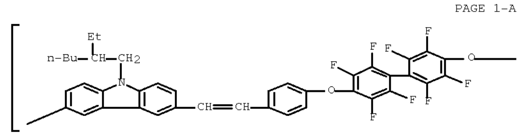
CRN 169051-20-1
CMF C22 H25 N O2



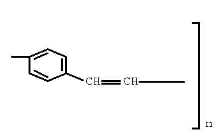
CAS Registry Number
352354-15-5 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenyleneoxy(2,2',3,3',5,5',6,6'-octafluoro[1,1'-biphenyl]-4,4'-diyl)oxy-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A

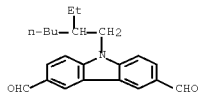


PAGE 1-B



CAS Registry Number
169051-20-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 39 THERE ARE 39 CAPLUS RECORDS THAT CITE THIS RECORD (40 CITINGS)

L38 ANSWER 76 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:632341 CAPLUS Full-text
Document Number
136:118811
Title
Synthesis and characterization of novel bipolar PPV-based copolymer containing triazole and carbazole units
Author(Inventor
Liu, Ze; Wang, Li-Xiang; Jing, Xia-Bin; Wang, Fo-Song
Patent Assignee/Corporate Source
The State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, 130022, Peop. Rep. China
Source
Chinese Journal of Polymer Science (2001), 19(6), 615-621 CODEN: CJPSEO; ISSN: 0256-7679
Document Type
Journal
Language
English
Abstract
Two new blue light-emitting PPV-based conjugated copolymers containing both an electron-withdrawing unit (triazole-TAZ) and electron-rich moieties (carbazole-CAR and bicarbazole-BCAR) were prepared by Wittig condensation polymn. between the triazole diphosphonium salt and the corresponding dialdehyde monomers. Their structures and properties were characterized by FT-IR, TGA, DSC, UV-Vis, PL spectroscopy and electrochem. measurements. The resulting copolymers are soluble in common organic solvents and thermally stable with a Tg of 147°C for TAZ-CAR-PPV and of 157°C for TAZ-BCAR-PPV. The maximum photoluminescence wavelengths of TAZ-CAR-PPV and TAZ-BCAR-PPV film appear at 480 nm and 490 nm, resp. Cyclic voltammetry measurement demonstrates that TAZ-BCAR-PPV has good electrochem. reversibility, while TAZ-CAR-PPV exhibits the irreversible redox process. The triazole unit was found to be an effective π-conjugation interrupter and can play the rigid spacer role in determining the emission color of the resulting copolymer.
Hit Structure

CAS Registry Number
369047-65-0 CAPLUS

Chemical or Trade Name
Phosphonium, [(4-phenyl-4H-1,2,4-triazole-3,5-diyl)bis(4,1-phenyleneoxymethylene)]bis[tributyl-, dichloride, polymer with 9-octyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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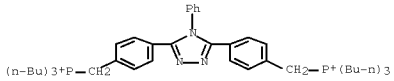
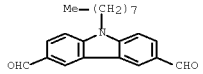
CRN 369047-64-7
CMF C46 H71 N3 P2 . 2 Cl



●2 Cl-

CM
2

CRN 31801O-43-4
CMF C22 H25 N O2

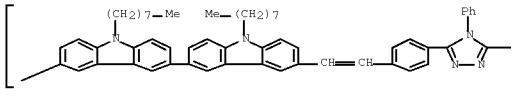


CAS Registry Number
369047-66-2 CAPLUS

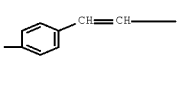
Chemical or Trade Name
Poly[9-octyl-9H-carbazole-3,6-diyl-1,2-ethenediyl-1,4-phenylene(4-phenyl-4H-1,2,4-triazole-3,5-diyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

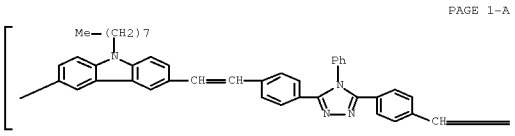
PAGE 1-A



PAGE 1-B



PAGE 1-A



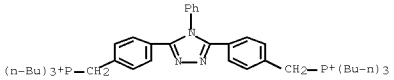
PAGE 1-B

CAS Registry Number
369047-67-0 CAPLUS

Chemical or Trade Name
Phosphonium, [(4-phenyl-4H-1,2,4-triazole-3,5-diyl)bis(4,1-phenyleneoxymethylene)]bis[tributyl-, dichloride, polymer with 9,9'-dioctyl[3,3'-bi-9H-carbazole]-6,6'-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

CRN 369047-64-7
CMF C46 H71 N3 P2 . 2 Cl



●2 Cl-

CM
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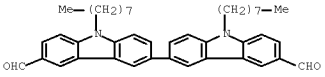
CRN 197017-43-5
CMF C40 H49 N3 O2



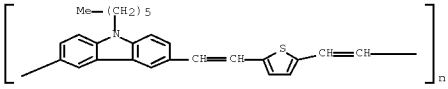
CAS Registry Number
369047-68-4 CAPLUS

Chemical or Trade Name
Poly[9,9'-dioctyl[3,3'-bi-9H-carbazole]-6,6'-diyl-1,2-ethenediyl-1,4-phenylene(4-phenyl-4H-1,2,4-triazole-3,5-diyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

L36 ANSWER 77 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:670399 CAPLUS Full-text
Document Number
136:6456
Title
A novel bipolar electroluminescent poly(arylene-ethynylene) consisting of carbazole and diethynylthiophene units
Author(Inventor
Zhen, Xiaowei; Liu, Yunqi; Zhu, Daoben; Jiang, Xuezhong; Jen, Alex K.-Y.
Patent Assignee/Corporate Source
Center for Molecular Science, Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100080, Peop. Rep. China
Source
Macromolecular Chemistry and Physics (2001), 202(11), 2341-2345 CODEN: MCHPES; ISSN: 1022-1352
Document Type
Journal
Language
English
Abstract
A novel bipolar conjugated copolymer poly[2, 5-diethynylthiophene)-alt-co-(9-hexyl-3,6-carbazole)] (PCT) bearing electron-affinitive moiety of 2,5-diethynylthiophene and hole-transport moiety of carbazole was synthesized via a Pd-catalyzed coupling reaction. The polymer possesses a weight-average mol. weight of 25000 with a polydispersity index of 2.5. PCT exhibits good thermal stability with a glass transition temperature of 105 °C and an onset decomposition temperature of 336 °C. The HOMO and LUMO energy levels of PCT were determined to be -5.36 and -2.46 eV, resp., using cyclic voltammetry. Single-layer and multilayer light-emitting diodes emit yellow light (peak at ~580 nm). Double-layer electroluminescent device with the structure of ITO/copper phthalocyanine/PCT/CaAg has an external quantum efficiency of 0.01%, higher than that of three-layer device with the structure of ITO/copper phthalocyanine/PCTA/Alq3/Al, indicating that the electron injection is the limiting factor for the performance of PCT in polymer light-emitting diodes.
Hit Structure

CAS Registry Number
374809-47-9 CAPLUS

Chemical or Trade Name
Poly[(9-hexyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl-2,5-thiophenediyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)

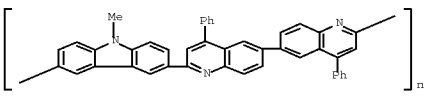


OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)

L38 ANSWER 78 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:658125 CAPLUS Full-text
Document Number
135:358600
Title
New Conjugated Polymers with Donor-Acceptor Architectures: Synthesis and Photophysics of Carbazole-Quinoline and Phenothiazine-Quinoline Copolymers and Oligomers Exhibiting Large Intramolecular Charge Transfer
Author(Inventor
Jenekhe, Samson A.; Lu, Langde; Alam, Maksudul M.
Patent Assignee/Corporate Source
Departments of Chemical Engineering and Chemistry, University of Washington, Seattle, WA, 98195-1750, USA
Source
Macromolecules (2001), 34(21), 7315-7324 CODEN: MAMOBX; ISSN: 0024-9297
Document Type
Journal
Language
English
Abstract
Alternating carbazole-quinoline and phenothiazine-quinoline donor-acceptor conjugated copolymers and a corresponding oligomer were synthesized, and their solution and solid-state photophysics were investigated. The new copolymers, poly(2,2'-di-methyl-3,6-carbazolylene-4,4'-biaryl-phenylquinoline) and poly(2,2'-10-methyl-3,7-phenothiazylene-4,4'-biaryl-phenylquinoline), had intrinsic viscosities of 1.1-2.2 dl/g, indicating very high mol. wts. The optical band gaps of the new copolymers were 2.35-2.64 eV, which are significantly smaller than the corresponding homopolymers. The absorption and emission spectra of the related donor-acceptor oligomers, 3,6-Bis(4-phenyl-2-quinolyl)-9-methylcarbazole and 3,7-Bis(4-phenyl-2-quinolyl)-10-methylphenothiazine, in solvents of varying polarity showed pos. solvatochromism. An unusual dual fluorescence, with a blue-emission band at 454 nm and an orange emission band at 564 nm, was observed in solid films of the carbazole-linked oligomer and related to intramol. excimers and intermol. excimers. Solid-state emission from the phenothiazine oligomer and copolymer was from intramol. excitons with strong charge-transfer character. The red solid-state emission from the carbazole-copolymer originated from intermol. excimers with dominant fluorescence lifetimes of 2-10 ns. The observed intramol. charge-transfer effects on photophysics and properties were larger in the phenothiazine-containing oligomer and copolymer than the corresponding carbazole-containing materials, reflecting the fact that phenothiazine is a stronger electron-donating unit. Preliminary results suggest that the oligomers and copolymers are useful for light-emitting and photovoltaic devices.
Hit Structure

CAS Registry Number
197143-71-6 CAPLUS

Chemical or Trade Name
Poly[(9-methyl-9H-carbazole-3,6-diyl)(4,4'-diphenyl[6,6'-biquinoline]-2,2'-diyl)] (9CI) (CA INDEX NAME)



CAS Registry Number
372591-30-7 CAPLUS

Chemical or Trade Name
Ethanone, 1,1'-(9-methyl-9H-carbazole-3,6-diyl)bis-, polymer with
(4,4'-diamino[1,1'-biphenyl]-3,3'-diyl)bis[phenylmethanone] (9CI) (CA
INDEX NAME)

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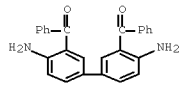
CRN 76713-10-5
CMF C26 H20 N2 O2



CM
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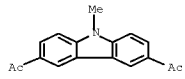
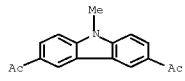
CRN 1463-90-3
CMF C17 H15 N O2



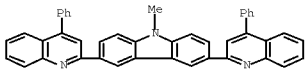
CAS Registry Number
1463-90-3 CAPLUS

Chemical or Trade Name
Ethanone, 1,1'-(9-methyl-9H-carbazole-3,6-diyl)bis- (CA INDEX NAME)



CAS Registry Number
37852-29-4 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-methyl-3,6-bis(4-phenyl-2-quinolinyl)- (CA INDEX NAME)



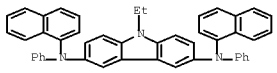
OS.CITING REF COUNT: 397 THERE ARE 397 CAPLUS RECORDS THAT CITE THIS
RECORD (398 CITINGS)

L36 ANSWER 79 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2003:619658 CAPLUS Full-text
Document Number
139:357646
Title
Light-Emitting Carbazole Derivatives: Potential Electroluminescent Materials
Author(s)/Inventor
Thomas, K. R. Justin; Lin, Jiann T.; Tao, Ya-Tao; Ko, Chung-Wen
Patent Assignee/Corporate Source
Institute of Chemistry, Academia Sinica, Taipei, 115, Taiwan
Source
Journal of the American Chemical Society (2003), 125(36), 10944-10953 CODEN: JACSAT; ISSN: 0002-7863
Document Type
Journal
Language
English
Abstract
Stable carbazole derivs. that contain peripheral diarylamines at the 3- and 6-positions and an Et or aryl substituent at the 9-position of the carbazole moiety have been synthesized via palladium-catalyzed C-N bond formation.

These new carbazole compds. (carbs) are amorphous with high glass transition temps. (Tg, 120-194 °C) and high thermal decomposition temps. (Td > 450 °C). The compds. are weakly to moderately luminescent in nature. The emission wavelength ranges from cyan to blue and is dependent on the substituent at the peripheral nitrogen atoms. Two types of light-emitting diodes were constructed from carb: (I) ITO/carb/TPB/Mg-Ag and (II) ITO/carb/Alq3/Mg-Ag, where TPB and Alq3 are 1,3,5-tris(N-phenylbenzimidazol-2-yl)benzene and tris(8-hydroxyquinoline) aluminum, resp. In type I devices, the carb functions as the hole-transporting as well as emitting material. In type II devices, either carb, or Alq3 is the light-emitting material. Several green light-emitting devices exhibit exceptional maximum brightness, and the phys. performance appears to be better than those of typical green light-emitting devices of the structure ITO/diamine/Alq3/Mg-Ag. The relation between the LUMO of the carb and the performance of the light-emitting diode is discussed.
Hit Structure

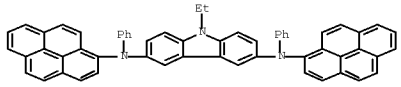
CAS Registry Number
144726-91-0 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3,N6-di-1-naphthalenyl-N3,N6-diphenyl-
(CA INDEX NAME)



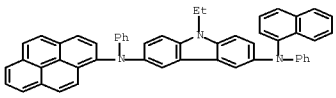
CAS Registry Number
373390-02-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3,N6-diphenyl-N3,N6-di-1-pyrenyl- (CA
INDEX NAME)



CAS Registry Number
373390-00-2 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3-1-naphthalenyl-N3,N6-diphenyl-N6-1-
pyrenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 158 THERE ARE 158 CAPLUS RECORDS THAT CITE THIS
RECORD (159 CITINGS)

L36 ANSWER 80 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:587248 CAPLUS Full-text
Document Number
135:172861
Title
Bicarbazolylbiocabazyl hole-transporting compound, its manufacture, and electroluminescent device using it with high thermal stability
Author(s)/Inventor
Lee, Ji Hoon; Ki, In So; Cho, Song Woo; Che, Byong Hoon
Patent Assignee/Corporate Source
Samsung SDI Co., Ltd., S. Korea
Source
Jpn. Kokai Tokkyo Koho, 13 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

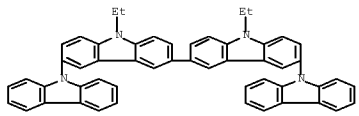
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001220580	A	20010814	JP 2000-121836	20000421
JP 3335865	B2	20021021		
KR 2001077779	A	20010820	KR 2000-5614	20000208
US 20010044512	A1	20011129	US 2001-778859	20010208
US 6451461	B2	20020917		

Abstract
The hole-transporting compound is a 5,5'-bis[9H-(9-carbazolyl)-N,N'- disubstituted-3,3'-bicarbazyl derivative I (R = H, C1-12 aliphatic alkyl, branched alkyl, cyclic alkyl, C4-14 arom group; R may be substituted with 1 or 2 alkoxy

or amine). The electroluminescent device uses I as a hole-transporting agent and has a laminated structure of A/HIL/C, A/B/HIL/C, A/HIL/E/C, A/HIL/B/HIL/C, or A/B/HIL/B/HIL/C (A = anode, B = buffer layer, H = hole-transporting layer, L = light- emitting layer, E = electron-transporting layer, HB = hole-shielding layer, C = cathode). I is manufactured by (I) mixing CHCl3 solution of N-substituted carbazole with Fe chloride-dispersed CHCl3 to prepare N,N'-disubstituted 3,3'-bicarbazyl II, (2) reacting II with halogens or halides to prepare N,N'-disubstituted 5,5'-dihalo-3,3'-bicarbazyl III (X = halo), and (3) reacting III with carbazole in aromatic solvents. The device shows high efficiency and long service life.
Hit Structure

CAS Registry Number
354175-64-1 CAPLUS

Chemical or Trade Name
9,3':6',3'':6'',9'''-Quater-9H-carbazole, 9',9''-diethyl- (9CI) (CA INDEX
NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)

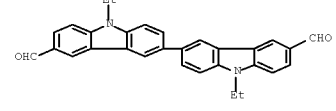
L36 ANSWER 81 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:567334 CAPLUS Full-text
Document Number
135:123935
Title
Bicarbazyl-based (poly)condensation products, their preparation and use
Author(s)/Inventor
Ades, Dominique; Bouzard, Valerie; Siove, Alain
Patent Assignee/Corporate Source
Therapeutiques Substitutives, Fr.
Source
Fr. Demande, 23 pp. CODEN: FRXXBL
Document Type
Patent
Language
French
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2800080	A1	20010427	FR 1999-13035	19991022

Abstract
Condensation products of N,N'-disubstituted 3,3'-bicarbazole-6,6'-dicarboxaldehydes with active methylene compds. are electroluminescent and useful in LEDs and imaging devices. Thus, condensation of 0.33 mmol 9,9-dioctyl-3,3'-bicarbazole-6,6'- dicarboxaldehyde with 0.33 mmol m-C6H4(CH2CN)2 in the presence of 0.33 mmol Bu4NOH in a refluxing mixture of 7 mL THF and 3.5 mL MeOH under Ar for 4 h gave a copolymer (>97% yield) with Mn approx.40,000, Tg approx.100°, absorption λmax 390 nm and luminescence λmax 540 nm.
Hit Structure

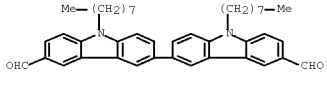
CAS Registry Number
57102-07-1 CAPLUS

Chemical or Trade Name
[3,3'-Bi-9H-carbazole]-6,6'-dicarboxaldehyde, 9,9'-diethyl- (CA INDEX
NAME)



CAS Registry Number
193017-43-5 CAPLUS

Chemical or Trade Name
[3,3'-Bi-9H-carbazole]-6,6'-dicarboxaldehyde, 9,9'-dioctyl- (CA INDEX
NAME)

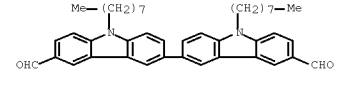


CAS Registry Number
350479-91-3 CAPLUS

Chemical or Trade Name
1,3-Benzenediacetonitrile, polymer with
9,9'-dioctyl[3,3'-bi-9H-carbazole]-6,6'-dicarboxaldehyde (9CI) (CA INDEX
NAME)

CM
1

CRN 193017-43-5
CMF C42 H48 N2 O2



CM
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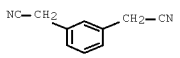
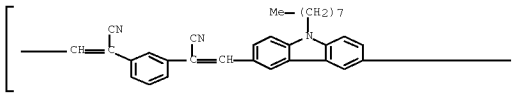
CRN 626-03-9
CMF C10 H8 N2



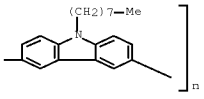
CAS Registry Number
350479-93-4 CAPLUS

Chemical or Trade Name
Poly[(9,9'-dioctyl[3,3'-bi-9H-carbazole]-6,6'-diyl)(2-cyano-1,2-
ethenediyl)-1,3-phenylene(1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



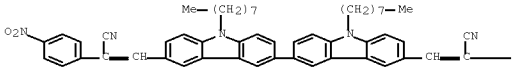
PAGE 1-B



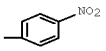
CAS Registry Number
350668-54-9 CAPLUS

Chemical or Trade Name
Benzeneacetonitrile, α,α'-[(9,9'-dioctyl[3,3'-bi-9H-carbazole]-
6,6'-diyl)dimethylidyne]bis[4-nitro- (9CI) (CA INDEX NAME)

PAGE 1-A

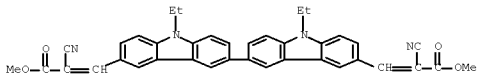


PAGE 1-B



CAS Registry Number
350668-53-8 CAPLUS

Chemical or Trade Name
2-Propenoic acid, 3,3'-(9,9'-diethyl[3,3'-bi-9H-carbazole]-6,6'-diyl)bis[2-
cyano-, diethyl ester (9CI) (CA INDEX NAME)

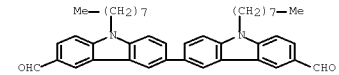


CAS Registry Number
350668-36-1 CAPLUS

Chemical or Trade Name
Acetic acid, cyano-, oxydi-2,1-ethanediyl ester, polymer with
9,9'-dioctyl[3,3'-bi-9H-carbazole]-6,6'-dicarboxaldehyde (9CI) (CA INDEX
NAME)

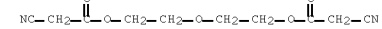
CM
1

CRN 193017-43-5
CMF C42 H46 N2 O2



CM
2

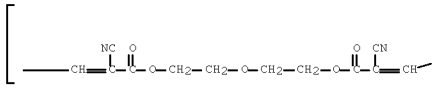
CRN 90870-40-9
CMF C10 H12 N2 O5



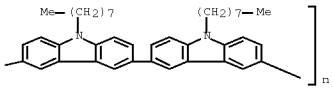
CAS Registry Number
350668-37-2 CAPLUS

Chemical or Trade Name
Poly[(9,9'-dioctyl[3,3'-bi-9H-carbazole]-6,6'-diyl)(2-cyano-3-oxo-1-
propene-1,3-diyl)oxy-1,2-ethanediyloxy-1,3-ethanediyloxy(2-cyano-1-oxo-2-
propene-1,3-diyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
(2 CITINGS)

L38 ANSWER 82 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:520463 CAPLUS Full text

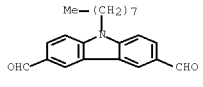
Document Number
135:269141
Title
Synthesis of carbazole-containing PPV and its application to the electroluminescent devices
Author(s)
Lee, J. S.; Oh, E. J.; Park, J. Y.; Shin, M. W.; Cho, I. H.
Patent Assignee/Corporate Source
Department of Chemistry Semiconductor, Myongji University, Kyonggi-Do, 449-728, S. Korea
Source
Materials Science & Engineering, B: Solid-State Materials for Advanced Technology (2001), B85(2-3), 166-169 CODEN: MSBTEK; ISSN: 0921-5107
Document Type
Journal
Language
English
Abstract
A carbazole-containing PPV (CC-PPV) was chemical synthesized and demonstrated to be electroluminescent for application to a light-emitting diode (LED). Soluble CC-PPV was prepared from 9-octyl-9H-carbazole-3,6-dicarboxaldehyde and a bis(hexyloxy)-p-xylylenediphosphonium salt in ethanol/chloroform by the Wittig reaction. The UV-visible absorption spectrum of CC-PPV in chloroform has a maximum absorption wavelength at 408 nm, which is caused by the π-π* transition of the conjugated system. In photoluminescence, maximum wavelength of emission was found at 512 nm. From thermogravimetric anal., it was confirmed that the synthesized CC-PPV is stable up to 180°C. For LED fabrication, the CC-PPV was dissolved in toluene to prepare a 1.0 weight% solution and the film cast from this solution was demonstrated to be light-emitting at an applied voltage of 3.7 V.
Hit Structure

CAS Registry Number
345279-90-9 CAPLUS

Chemical or Trade Name
Phosphonium, [(2,5-bis(hexyloxy)-1,4-
phenylene)bis(methylene)]bis[triphenyl-, dibromide, polymer with
9-octyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

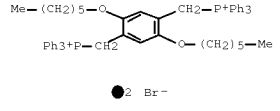
CM
1

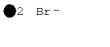
CRN 313018-43-4
CMF C22 H25 N O2



CM
2

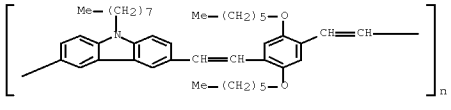
CRN 165377-98-6
CMF C56 H62 O2 P2 . 2 Br





CAS Registry Number
345279-91-0 CAPLUS

Chemical or Trade Name
Poly[(9-octyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl(2,5-bis(hexyloxy)-1,4-
phenylene)-1,2-ethenediyl] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
(2 CITINGS)

L38 ANSWER 83 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:479256 CAPLUS Full text
Document Number
135:211378
Title
Synthesis and properties of σ-π conjugated alternating polymers consisting of carbazole and organosilicon units
Author(s)
Sakamaki, Koichi; Ohshita, Joji; Kunai, Atsutaka; Nakao, Hidenobu; Adachi, Akira; Okita, Koichi
Patent Assignee/Corporate Source
Advanced Materials Laboratory, Tsukuba Research Center, Japan Chemical Innovation Institute, Tsukuba, 305-0047, Japan
Source
Applied Organometallic Chemistry (2001), 15(7), 604-612 CODEN: AOCHEX; ISSN: 0268-2605
Document Type
Journal
Language
English
Abstract
We have synthesized novel σ-π conjugated polymers with an alternating organosilanylene and π-electron system, intending to utilize them for hole-transporting materials of electroluminescent (EL) devices. 3,6-Di(thienyl)carbazoles were co-polymerized with organodichlorosilanes to give the corresponding polymers with mol. wts. of MW = 2000-8000. Another type of polymer with a thienylene unit was also synthesized by the nickel-catalyzed reaction of the di-Grignard reagent of 1,2-bis(2-(5-bromothienyl)ethoxy)ethane with 3,6-dibromocarbazole, the mol. weight being Mn = 3100. The EL devices with a double-layer system composed of tris(8-quinolinolato)aluminum(III) and the present polymers as the emitting-electron-transporting and hole-transporting layers, resp., emit green EL with a maximum intensity of the order of 103 cd m-2. Of these, the device with the thienylene-carbazole polymers exhibited the highest luminance of 1480 cd m-2.
Hit Structure

CAS Registry Number
357457-00-0 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-methyl-, polymer with dichlorodiethylsilane
(9CI) (CA INDEX NAME)

CM
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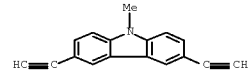
CRN 357457-70-6
CMF C17 H11 N



CM
2

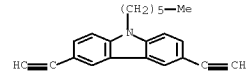
CRN 1719-53-5
CMF C4 H10 Cl2 Si

CAS Registry Number
357457-01-1 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-hexyl-, polymer with dichlorodiethylsilane
(9CI) (CA INDEX NAME)

CM
1

CRN 154972-68-8
CMF C22 H21 N

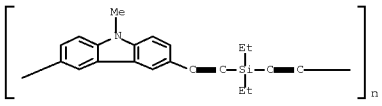


CM
2

CRN 1719-53-5
CMF C4 H10 Cl2 Si

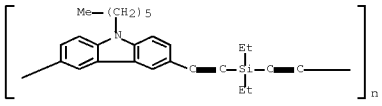
CAS Registry Number
357457-04-4 CAPLUS

Chemical or Trade Name
Poly[(9-methyl-9H-carbazole-3,6-diyl)-1,2-ethynediyl(diethylsilylene)-1,2-
ethynediyl] (9CI) (CA INDEX NAME)



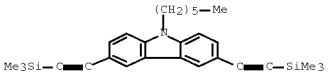
CAS Registry Number
357437-85-5 CAPLUS

Chemical or Trade Name
Poly[(9-hexyl-9H-carbazole-3,6-diyl)-1,2-ethynediyl(diethylsilylene)-1,2-ethynediyl] (9CI) (CA INDEX NAME)



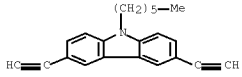
CAS Registry Number
156979-67-7 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-hexyl-3,6-bis[2-(trimethylsilyl)ethynyl]- (CA INDEX NAME)



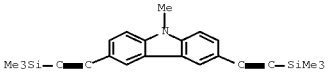
CAS Registry Number
156979-68-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-hexyl- (CA INDEX NAME)



CAS Registry Number
357437-76-4 CAPLUS

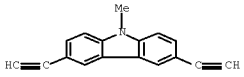
Chemical or Trade Name
9H-Carbazole, 9-methyl-3,6-bis[2-(trimethylsilyl)ethynyl]- (CA INDEX NAME)



CAS Registry Number

357437-78-6 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-methyl- (CA INDEX NAME)



OS.CITING REF COUNT: 0 THERE ARE 0 CAPLUS RECORDS THAT CITE THIS RECORD (0 CITINGS)

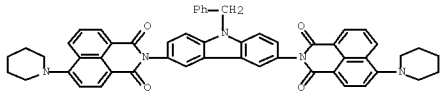
L36 ANSWER 84 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:436688 CAPLUS Full-text
Document Number
135:111803
Title
Molecular twist electroluminescent materials with charge carrier transporting functional groups and their use
Author(s)
Zhu, Weihong; Tian, He; Hu, Meng; Wu, Yingqi
Patent Assignee(s)
Corporate Source
Huadong Univ. of Science & Engineering, Peop. Rep. China
Source
Faming Zhuanli Shenqing Gongkai Shuomingshu, 13 pp. CODEN: CNXXEV
Document Type
Patent
Language
Chinese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1272523	A	20001108	CN 2000-116212	20000530
CN 1152942	C	20040609		

Abstract
Electroluminescent materials are claimed which are described by the general formulas. I and II (R = C2H5, C4H9, C6H13, C8H5CH2, C6H17, C10H21, C16H33 or C18H37, and X = amido, dimethylamido, diethylamido, piperidine, or piperazine). Electroluminescent device employing the materials are also described.
Hit Structure

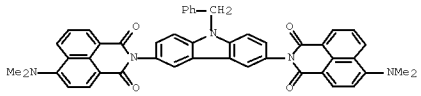
CAS Registry Number
343374-37-0 CAPLUS

Chemical or Trade Name
1H-Benz[de]isoquinoline-1,3(2H)-dione, 2,2'-[9-(phenylmethyl)-9H-carbazole-3,6-diyl]bis[6-(1-piperidinyl)- (CA INDEX NAME)



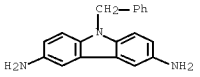
CAS Registry Number
343374-39-1 CAPLUS

Chemical or Trade Name
1H-Benz[de]isoquinoline-1,3(2H)-dione, 2,2'-[9-(phenylmethyl)-9H-carbazole-3,6-diyl]bis[6-(dimethylamino)- (CA INDEX NAME)



CAS Registry Number
84892-75-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-(phenylmethyl)- (CA INDEX NAME)



CAS Registry Number

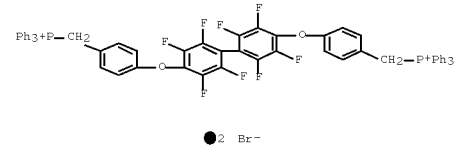
L36 ANSWER 65 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:376165 CAPLUS Full-text
Document Number
135:153192
Title
Synthesis and luminescent properties of blue light-emitting polymers containing high-electron affinity and hole transporting group
Author(s)
Ahn, T.; Shim, H.-K.
Patent Assignee(s)
Corporate Source
Center for Advanced Polymers, Department of Chemistry and School of Molecular Science (BK21), Korea Advanced Institute of Science and Technology, Taejon, 305-701, S. Korea
Source
Synthetic Metals (2001), 121 (1-3), 1663-1664 CODEN: SYMEDZ, ISSN: 03794779
Document Type
Journal
Language
English
Abstract
Poly[(oxy-4,4'-octafluorobiphenylyloxy)-1,4-phenylenevinylene-alt-2-methoxy- 5-(2-ethylhexyloxy)-1,4-phenylenevinylene], POFB-MEH-PPV, poly[oxy-4,4'-octafluorobiphenyloxy)-1,4-phenylenevinylene-alt-9,9-n -dihexyl-2,7-fluorenediylvinylene], POFB-PF, and poly[oxy-4,4'-octafluorobiphenyloxy)-1,4-phenylenevinylene-alt-N- ethylhexyl-3,6-carbazolevinylene], POCB-PK, were synthesized by Wittig condensation polymerization The resulting conjugated polymers were highly soluble in common organic solvents such as chloroform, 1,2-dichloroethane, and cyclohexanone and exhibited good thermal stability up to 300°. The synthesized polymers showed UV-visible absorbance and photoluminescence (PL) of 350-385 nm and 460-490 nm, resp. The carbazole or fluorene containing POFB-PK and POFB-PF showed blue PL peaks at 470 and 460 nm, resp. A single-layer light-emitting diode (LED) test structure of ITO/POFB-PK/Al was used to measure electroluminescence (EL) maximum of POFB-PK at 460 nm corresponding to the pure blue emission.
Hit Structure

CAS Registry Number
352354-14-4 CAPLUS

Chemical or Trade Name
Phosphonium, [(3,3',3,3',5,5',6,6'-octafluoro[1,1'-biphenyl]-4,4'-diyl)bis(oxy-4,1-phenylenemethylene)]bis[triphenyl-, chloride, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

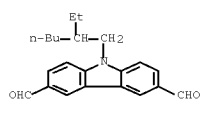
CRN 352354-13-3
CMF C62 H43 F8 O6 P2 . 2 Br



●2 Br−

CM
2

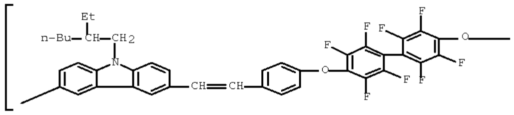
CRN 169051-80-1
CMF C22 H25 N O2



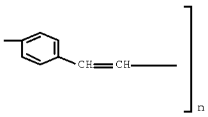
CAS Registry Number
352354-15-5 CAPLUS

Chemical or Trade Name
Poly[9-(9-ethylhexyl)-9H-carbazole-3,6-diyl-1,2-ethenediyl-1,4-phenyleneoxy(3,3',3',3',5,5',6,6'-octafluoro[1,1'-biphenyl]-4,4'-diyl)oxy-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



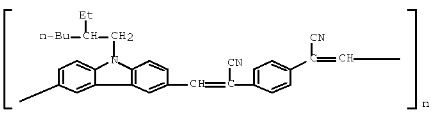
OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

L38 ANSWER 86 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2001:376080 CAPLUS Full-text
Document Number
135:123448
Title
Study of Langmuir-Blodgett films of a conjugated poly(3,6-N-2-ethylhexyl carbazolyl cyanotere-phthalidene)
Author/Inventor
Kim, T.-W.; Lee, H.-S.; Lee, J.-H.; Park, J.-W.; Kang, D.-Y.
Patent Assignee/Corporate Source
Dept. of Physics, Hongik University, Seoul, 121-791, S. Korea
Source
Synthetic Metals (2001), 121 (1-3), 1427-1428 CODEN: SYMEDZ; ISSN: 0379-6779
Document Type
Journal
Language
English
Abstract
Green light-emitting material, poly(3,6-N-2-ethylhexyl carbazolyl cyanotere-phthalidene)(PECCP), was synthesized which has an electron-donor and electron-acceptor moiety in a repeated unit of polymer. We have made PECCP Langmuir-Blodgett (LB) films and they exhibit fluorescence. Organic light-emitting diodes with a single-layer structure (ITO/emitting layer/Al) have been fabricated with the PECCP LB films as an emitting material. We have observed green photoluminescent and electroluminescent spectra at λmax = 536nm corresponding to 2.34 eV.
Hit Structure

CAS Registry Number
192446-73-4 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)-1,4-phenylene(1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)



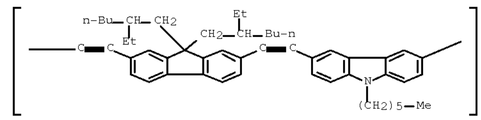
OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L38 ANSWER 87 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2001:368970 CAPLUS Full-text
Document Number
135:181052
Title
Synthesis and electroluminescence of poly(aryleneethynylene)s based on fluorene containing hole-transport units
Author/Inventor
Zhan, Xiaowei; Liu, Yunqi; Yu, Gui; Wu, Xia; Zhu, Daoben; Sun, Runguang; Wang, Daike; Epstein, Arthur J.
Patent Assignee/Corporate Source
Institute of Chemistry, Center for Molecular Science, Chinese Academy of Sciences, Beijing, 100080, Peop. Rep. China
Source
Journal of Materials Chemistry (2001), 11(6), 1606-1611 CODEN: JMACEP; ISSN: 0959-9428
Document Type
Journal
Language
English
Abstract
A series of light-emitting poly(arylene ethynylene)s (PAE) based on fluorene with sterically hindered substituents containing hole transport units such as tetraphenyldiaminobiphenyl, carbazole, and thiophene and the non-planar unit binaphthyl, were synthesized by palladium-catalyzed coupling reaction. The introduction of hole transport moieties into the PAE main chain improved the luminance properties of PAE polymers. The electronic structure and photo- and electroluminescent (EL) properties of these polymers can be manipulated by simply varying the nature of the co-units in the polymeric chain. The spectral emission varies from greenish-blue to green or yellowish-green, depending on the composition of the copolymers. A single-layer test device, light-emitting diode (LED) prepared from poly{[2,7-diethynyl-9,9-bis(2-ethylhexyl)fluorene]-alt-[N,N'- diphenyl-N,N'-bis(4-phenyl)-1,1'-biphenyl-4,4'-diamine]} (TPD-PFE) using an aluminum electrode emits green light (510 nm) with an EL external quantum efficiency of 0.007% and a brightness of 30 cd m-2 at a bias voltage of 27 V and a c.d. of 420 mA cm-2. An EL external quantum efficiency of 0.06% can be obtained from a blue-emitting double-layer LED with the structure of ITO/TPD-PFE/2-(2- hydroxyphenyl)pyridylberyllium/LiF/AlLi at a c.d. of 38 mA cm-2.
Hit Structure

CAS Registry Number
355804-07-8 CAPLUS

Chemical or Trade Name
Poly[(9-hexyl-9H-carbazole-3,6-diyl)-1,2-ethynediyl[9,9-bis(2-ethylhexyl)-9H-fluorene-2,7-diyl]-1,2-ethynediyl] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 41 THERE ARE 41 CAPLUS RECORDS THAT CITE THIS RECORD (41 CITINGS)

L38 ANSWER 88 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2001:297576 CAPLUS Full-text
Document Number
134:346283
Title
Electroluminescent devices having naphthylanthracene-based polymers
Author/Inventor
Shi, Jianmin; Zheng, Shiying
Patent Assignee/Corporate Source
Eastman Kodak Company, USA
Source
Eur. Pat. Appl., 56 pp. CODEN: EPXXDW
Document Type
Patent
Language
English
Patent Information

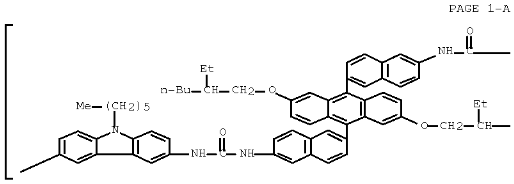
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1094101	A2	20010425	EP 2000-203504	20001009
EP 1094101	A3	20040331		
EP 1094101	B1	20060111		
US 6361887	B1	20020326	US 1999-421980	19991020
TW 270572	B	20070111	TW 2000-117219	20000825
JP 2001181619	A	20010703	JP 2000-320865	20001020

Abstract
Electroluminescent devices comprising an anode, a cathode, and polymer luminescent materials disposed between the anode and cathode are described in which the polymeric luminescent materials include 9,10-di-(2-naphthyl)anthracene-based polymers described by the general formula I (R1-4 = independently selected H, alkyl, C1-24 alkoxy, C6-28 (un)substituted aryl, C4-40 (un)substituted heteroaryl, F, Cl, Br, cyano, or nitro groups; X = a linking group; and Y includes ≥1 comonomer units that are (un)substituted alkyl, alkenyl, aryl, heteroaryl, or conjugated groups).
Hit Structure

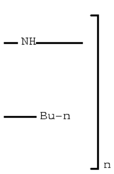
CAS Registry Number
337369-58-1 CAPLUS

Chemical or Trade Name
Poly[(9-hexyl-9H-carbazole-3,6-diyl)iminocarbonylimino-2,6-naphthalenediyl[2,6-bis[(2-ethylhexyl)oxy]-9,10-anthracenediyl]-2,6-naphthalenediyliminocarbonylimino] (9CI) (CA INDEX NAME)

PAGE 1-A



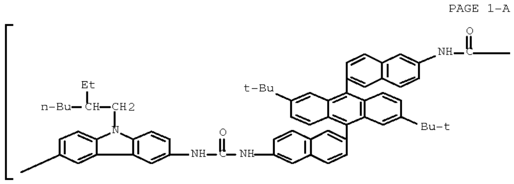
PAGE 1-B



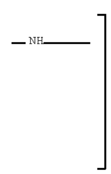
CAS Registry Number
337369-61-6 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]iminocarbonylimino-2,6-naphthalenediyl[2,6-bis(1,1-dimethylethyl)-9,10-anthracenediyl]-2,6-naphthalenediyliminocarbonylimino] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)

L38 ANSWER 89 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:238145 CAPLUS Full-text
Document Number
134:245020
Title
Preparation and application of electroluminescent polymers containing multiple functional groups
Author/Inventor
Zhu, Weihong; Tian, He; Hu, Meng
Patent Assignee/Corporate Source
Huadong Science and Engineering Univ., Peop. Rep. China
Source
Faming Zhuanli Shenqing Gongkai Shuomingshu, 14 pp. CODEN: CNXXEV
Document Type
Patent
Language
Chinese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1266877	A	20000920	CN 2000-111494	20000125
CN 1152941	C	20040609		

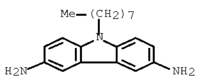
Abstract
Electroluminescent polymers prepared by connecting main chain with electron transporting functional group, hole transporting functional group and luminous unit are described by the general formula I, II, and III (B = IV; B'= V; C = VI; C'= VII; and D = $O(CH_2)_nOCO(CH_2)_mCO$; x = 0.10-0.30; y = 0.10-0.30; z = 0.40-0.80; p = 30-100; m, n = 2,4, 6, and 8 and R = alkyl groups). The polymers can be used in electroluminescent devices.
Hit Structure

CAS Registry Number
330482-48-9 CAPLUS

Chemical or Trade Name
1H-Benz[de]isoquinoline-2(3H)-propanal, 1,3-dioxo-6-[(3-oxopropyl)amino]-, polymer with 9-octyl-9H-carbazole-3,6-diamine and 4,4'-(1,3,4-oxadiazole-2,5-diyl)bis[benzenamine] (9CI) (CA INDEX NAME)

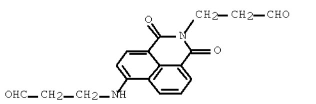
CM
1

CRN 330482-47-8
CMF C20 H27 N3



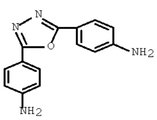
CM
2

CRN 330482-46-7
CMF C18 H16 N2 O4



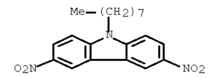
CM
3

CRN 2425-95-8
CMF C14 H12 N4 O



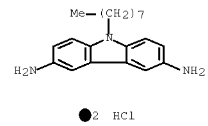
CAS Registry Number
330482-49-0 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-dinitro-9-octyl- (CA INDEX NAME)



CAS Registry Number
330482-50-3 CAPLUS

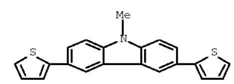
Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-octyl-, hydrochloride (1:2) (CA INDEX NAME)



L38 ANSWER 90 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:186600 CAPLUS Full-text
Document Number
134:367310
Title
Synthesis of polymers with isolated thiophene-arylidene-thiophene chromophores for enhanced and specific electron/hole transport
Author/Inventor
Sitoff, Elliad R.; Asadi, Ahmed S. I.; Sheradsky, Tuvia
Patent Assignee/Corporate Source
Department of Organic Chemistry, Hebrew University, Jerusalem, 91904, Israel
Source
Journal of Polymer Science, Part A: Polymer Chemistry (2001), 39(6), 872-879 CODEN: JPACEC; ISSN: 0887-624X
Document Type
Journal
Language
English
Abstract
The synthesis of 9 new polymers intended for future use in light-emitting diodes is described. The polymers consist of alternating units of thiophene-arylidene-thiophene chromophores and saturated Si-containing spacers. The arylidene moieties include benzene-1,4-, 2,5-dimethoxybenzene-1,4-, naphthalene-1,4-, anthracene-9,10-, pyridine-2,5-, pyridine-2,6-, N-methylcarbazole-3,6-, 1,3,4-oxadiazole-2,5-, and 4,4'-dimethyl-2,2'-bithiazole-5,5'-. The syntheses involved dibromination of the central arene followed by Suzuki or Kumada cross-coupling reactions with 2 thiophene units. Subsequent dilithiation and reaction with dihalosilylalkanes provided the polymers. Their optical properties, including UV-visible absorption and emission in solution, were comparable to those of the parent monomer units, and they possessed the phys. characteristics of macromols.
Hit Structure

CAS Registry Number
340015-57-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-methyl-3,6-di-2-thienyl- (CA INDEX NAME)

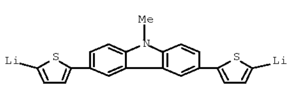


CAS Registry Number
340015-72-7 CAPLUS

Chemical or Trade Name
Lithium, [μ-[(9-methyl-9H-carbazole-3,6-diyl)di-5,2-thiophenediyl]]di-, polymer with 1,2-ethanediylbis[chlorodimethylsilane] (9CI) (CA INDEX NAME)

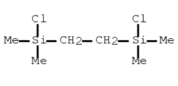
CM
1

CRN 340015-71-6
CMF C21 H13 Li2 N S2



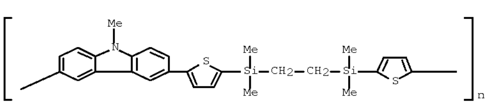
CM
2

CRN 13528-93-3
CMF C6 H16 Cl2 Si2



CAS Registry Number
340015-82-9 CAPLUS

Chemical or Trade Name
Poly[(9-methyl-9H-carbazole-3,6-diyl)-2,5-thiophenediyl(dimethylsilylene)-1,2-ethanediyl(dimethylsilylene)-2,5-thiophenediyl] (9CI) (CA INDEX NAME)

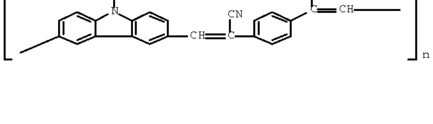


OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

L38 ANSWER 91 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:178755 CAPLUS Full-text
Document Number
135:68241
Title
Characteristics of organic electroluminescent devices using polypyrrole conducting layer
Author/Inventor
Park, J.-W.; Lee, J.-Y.; Kho, S.-I.; Lee, H.-S.; Kim, T.-W.
Patent Assignee/Corporate Source
Department of Polymer Engineering, Chungju National University, Chungbuk, Chungju, S. Korea
Source
Synthetic Metals (2001), 117(1-3), 119-122 CODEN: SYMEDZ; ISSN: 0379-6779
Document Type
Journal
Language
English
Abstract
The authors observed EL properties based on PVK, poly(3,6-N-2-ethylhexylcarbazolyl cyanoterephthalydene) (PECCP) and Alq3 emitting material devices with doped PPy conducting layer (>5 S/cm) and undoped polyacetylene derivative layer (PEPB, 10-10-10-11 S/cm) on top of rough ITO (surface resistance: <7 Ω/.box.). PPy conducting layer improved an EL efficiency of ITO/TPD/Alq3/Al device, which has a rough ITO surface of >1000 Å peak to peak level. In PVK, PECCP EML device, when PPy is layered on top of ITO, the turn-on voltage is lowered from 13 to 10 V and from 15 to 9 V, resp. The conductivity of undoped PEPB film is too low to improve EL property though it has good smoothness.
Hit Structure

CAS Registry Number
192446-73-4 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)-1,4-phenylene(1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)

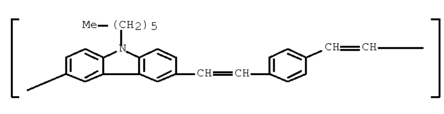


OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L38 ANSWER 92 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2001:154311 CAPLUS Full-text
Document Number
135:6190
Title
Synthesis and characterization of color tunable electro-luminescent polymer by blending oxadiazole containing polymer
Author/Inventor
Jin, S.-H.; Jung, J.-E.; Park, D.-K.; Jeon, B.-C.; Kwon, S.-K.; Kim, Y.-H.; Moon, D.-K.; Kim, S.-H.; Gal, Y.-S.
Patent Assignee/Corporate Source
Chemistry Education Major, Pusan National University, Pusan, 609-735, S. Korea
Source
European Polymer Journal (2001), 37(5), 921-925 CODEN: EUPJAG; ISSN: 0014-3057
Document Type
Journal
Language
English
Abstract
The electro-optical properties of novel polymers such as poly(phenylenevinylene-alt-N-hexylcarbazolevinylene) ([poly(PPV-N-hexylCvz)]) poly[1',4'-phenylene-1'',4''-(2''-(2'''-ethylhexyloxy))phenylene-2,5-(1''',4'''-phenylene)-1,3,4-oxadiazolyl] (PPEPPO) and their blends were characterized. The photoluminescence and electroluminescence (EL) spectra of the blend films composed of poly(PPV-N-hexylCvz) and PPEPPO were mainly contributed from the luminance of poly(PPV-N-hexylCvz) even at low poly(PPV-N-hexylCvz) ratios. Remarkably enhanced EL efficiency was observed as increase the ratio of PPEPPO. This probably results from the energy transfer in the excited state from PPEPPO, with a larger band gap, to poly(PPV-N-hexylCvz) with a smaller band gap. When the ratio of PPEPPO was increased, we observed color emission from green to blue and slightly increased the turn-on voltage compared to poly(PPV-N-hexylCvz). The forward bias turn-on voltage for the light emitting diodes are 5 V for poly(PPV-N-hexylCvz) and 40 V for PPEPPO, resp.
Hit Structure

CAS Registry Number
315701-21-4 CAPLUS

Chemical or Trade Name
Poly[(9-hexyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)

L38 ANSWER 93 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2000:897686 CAPLUS Full-text

Document Number
134:287247

Title
Organic light emitting diodes fabricated with single wall carbon nanotubes dispersed in a hole conducting buffer: the role of carbon nanotubes in a hole conducting polymer

Author/Inventor
Woo, H. S.; Czerw, R.; Webster, S.; Carroll, D. L.; Park, J. W.; Lee, J. H.

Patent Assignee/Corporate Source
Department of Physics and Astronomy, Clemson University, Clemson, SC, 29634, USA

Source
Synthetic Metals (2001), 116(1-3), 369-372 CODEN: SYMEDZ; ISSN: 0379-6779

Document Type
Journal

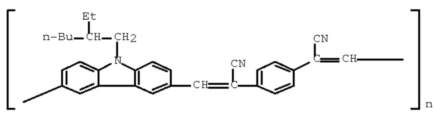
Language
English

Abstract
To study the role of single wall C nanotubes (SWNTs) in a hole conducting polymer, organic light emitting diodes (OLEDs) were fabricated with a conjugated emissive copolymer, poly(3,6-N-2-ethylhexyl carbazolyl cyanoterephthalidence) (PECCP) and SWNTs dispersed in a hole conducting buffer polymer, polyethylene dioxythiophene (PEDOT). Devices made with SWNTs dispersed in PEDOT and devices made without SWNTs in the PEDOT emit green light at 2.37 eV as expected for PECCP. However, the device made with SWNTs in the buffer layer shows a significant decrease in the electroluminescence (EL) as compared to that of the device without the SWNTs. In contrast, the photoluminescence (PL) from the same organic layer combination, excited from the PECCP side and measured through the PEDOT and the In Sn oxide glass, shows very little difference between the films with and without the SWNTs. The current-voltage (I-V) characteristics of OLEDs with SWNTs show a lower I-V power dependence (I-V2) near 1-2 V than that of the device without SWNTs which has a power dependence of I-V5. The EL and the I-V data together with the PL suggest an electronic interaction between the SWNTs and the host polymeric material, PEDOT. Probably this electronic interaction originates from the hole trapping nature of SWNTs in a hole conducting polymer.

Hit Structure

CAS Registry Number
192446-73-4 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)-1,4-phenylene(1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 111 THERE ARE 111 CAPLUS RECORDS THAT CITE THIS RECORD (111 CITINGS)

L38 ANSWER 94 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2000:869602 CAPLUS Full-text

Document Number
134:49288

Title
Cyclic organic compound for electroluminescence device material

Author/Inventor
Maruyama, Sumio; Wada, Tatsuo; Shobu, Hiroyuki

Patent Assignee/Corporate Source
Institute of Physical and Chemical Research, Japan

Source
Jpn. Kokai Tokkyo Koho, 6 pp. CODEN: JKXXAF

Document Type
Patent

Language
Japanese

Patent Information

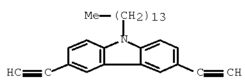
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000344777	A	20001212	JP 1999-151099	19990531
JP 3712037	B2	20051102		

Abstract
The cyclic organic compound for electroluminescence device material has structure I (R = alkyl; n = 1,5,9,13, 17). The cyclic compound has the low ionization potential and is suitable for spin coating.

Hit Structure

CAS Registry Number
188740-71-8 CAPLUS

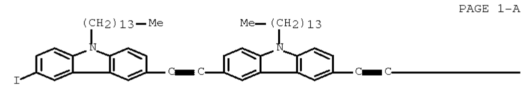
Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl- (CA INDEX NAME)



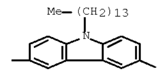
CAS Registry Number
245648-35-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis[2-(6-iodo-9-tetradecyl-9H-carbazol-3-yl)ethynyl]-9-tetradecyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L38 ANSWER 95 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2000:865397 CAPLUS Full-text

Document Number
134:42603

Title
Preparation of ethenylalkylcarbazole-based polymer electroluminescence material

Author/Inventor
Maruyama, Sumio; Wada, Tatsuo; Sasabe, Hiroyuki

Patent Assignee/Corporate Source
Institute of Physical and Chemical Research, Japan

Source
Jpn. Kokai Tokkyo Koho, 4 pp. CODEN: JKXXAF

Document Type
Patent

Language
Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000344873	A	20001212	JP 1999-158261	19990604
JP 3492241	B2	20040203		

Abstract
Title polymer with average mol. weight >1,000,000 is prepared by polymerization of 3,6-diethenyl-9-alkylcarbazole with 3,6-dihalogeno-9-alkylcarbazole.

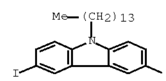
Hit Structure

CAS Registry Number
245648-38-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl-, polymer with 3,6-diiodo-9-tetradecyl-9H-carbazole (CA INDEX NAME)

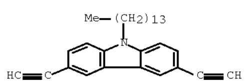
CM
1

CRN 197860-64-3
CMF C26 H35 I2 N



CM
2

CRN 188740-71-8
CMF C30 H37 N



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L38 ANSWER 96 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2000:835265 CAPLUS Full-text

Document Number
133:367677

Title
Organic electroluminescent devices

Author/Inventor
Tamano, Michiko

Patent Assignee/Corporate Source
Toyo Ink Mfg. Co., Ltd., Japan

Source
Jpn. Kokai Tokkyo Koho, 32 pp. CODEN: JKXXAF

Document Type
Patent

Language
Japanese

Patent Information

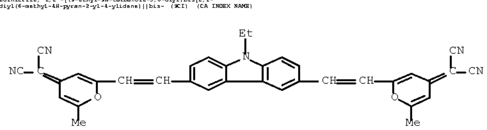
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000328052	A	20001128	JP 1999-135498	19990517

Abstract
The devices comprise I, II, III, IV and V (R1 = H, (substituted) alkyl, (substituted) aryl; A = O, methylene; B = O, S; R2,3 = H, cyano, halo, alkylcarbonyl, alkoxycarbonyl, cannot be H simultaneously, may form a ring; R4-6 = H, (substituted) alkyl, (substituted) aryl; X = direct bonding, divalent (substituted) alkyl, divalent (substituted) aryl, O, S, (substituted) N, carbonyl, thiocarbonyl).

Hit Structure

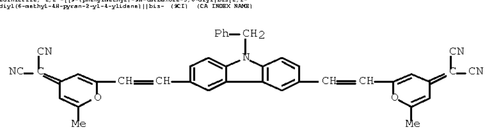
CAS Registry Number
307519-17-1 CAPLUS

Chemical or Trade Name
Propanedinitrile, 2,2'-[(9-ethyl-9H-carbazole-3,6-diyl)bis[2,1-ethenediyl(6-methyl-4H-pyran-2-yl-4-ylidene)]]bis- (9CI) (CA INDEX NAME)



CAS Registry Number
307519-19-3 CAPLUS

Chemical or Trade Name
Propanedinitrile, 2,2'-[[9-(phenylmethyl)-9H-carbazole-3,6-diyl]bis[2,1-ethenediyl(6-methyl-4H-pyran-2-yl-4-ylidene)]]bis- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L38 ANSWER 97 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2000:808252 CAPLUS Full-text

Document Number
134:148178

Title
Palladium-Catalyzed Direct Synthesis, Photophysical Properties, and Tunable Electroluminescence of Novel Silicon-Based Alternating Copolymers

Author/Inventor
Jung, Sung-Hyun; Kim, Hwan Kyu; Kim, Sung-Hyun; Kim, Yong Hee; Jeoung, Sae Chae; Kim, Dongho

Patent Assignee/Corporate Source
Department of Polymer Science & Engineering, Hannam University, Taejon, 306-791, S. Korea

Source
Macromolecules (2000), 33(25), 9277-9288 CODEN: MAMOBX; ISSN: 0024-9297

Document Type
Journal

Language
English

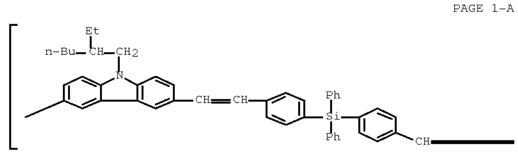
Abstract
A new class of silicon-based alternating copolymers with a uniform π-conjugated segment regulated by organosilicon units was synthesized using the Heck reaction between distyrylsilane monomers and appropriate arylene dibromides. The incorporation of organosilicon units with the aromatic or aliphatic groups on the silicon atoms into π-conjugated systems improved their processability and interrupted the π-conjugation length. They could be spin-cast onto various substrates to give highly transparent homogeneous thin films. Their glass transition temps. were in the range 94-127 °C. They show strong absorption bands around 356-416 nm, which corresponds to the π-π* transition of the conjugated segments. The maximum photoluminescence appeared around 440-526 nm in the blue or green emission region. Their optical properties depend on the arylene dibromides in the Heck reaction. The single-layered light- emitting diode of an Al/SiPhPPV or SiHMPPV/ITO glass exhibits a threshold voltage of 10-12 V from the I-V curve. The electroluminescence (EL) of the SiPhPPV or SiHMPPV gives an emissive peak at 450 nm. Furthermore, the multilayered light- emitting diodes of an Al/LiAl/SiPhPVK/PANI/ITO glass and an Al/LiAl/SiPhFPV or SiHMFPV/ITO glass shows a threshold voltage of 6-12 V. The EL device based on SiPhPVK exhibits the blue emissive color at 467 nm, when an operating voltage of 7 V was applied. When an operating voltage of 11 V was applied, however, the EL device emits a white color. The EL spectra of the SiPhFPV and SiHMFPV polymers, obtained at an applied voltage of 12 V, show two strong peaks in the blue emissive region as well as in the green region.

Hit Structure

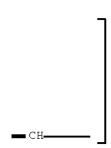
CAS Registry Number
189575-99-3 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(diphenylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A

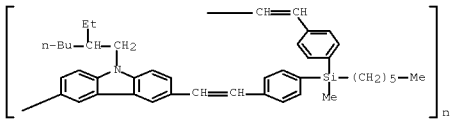


PAGE 1-B



CAS Registry Number
189576-01-0 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(hexylmethylsilylene)-1,4-phenylene-1,2-ethenediyl] (CA INDEX NAME)

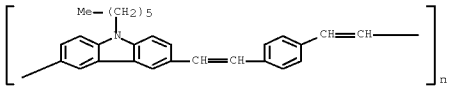


OS.CITING REF COUNT: 74 THERE ARE 74 CAPLUS RECORDS THAT CITE THIS RECORD (76 CITINGS)

L38 ANSWER 98 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2000:764559 CAPLUS Full text
Document Number
134:78154
Title
Color tunable electroluminescence from polymer blends containing carbazole unit
Author(s)/Inventor
Lee, Seok-Hee; Jin, Sung-Ho; Moon, Seong-Bae; Song, In-Sung; Kim, Woo-Hong; Kwon, Sun-Ki; Park, Nam-Hook; Han, Eun-Mi
Patent Assignee/Corporate Source
Dept. of Chem. Edu., Pusan National University, Pusan, 609-735, S. Korea
Source
Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (2000), 349, 507-510 CODEN: MCLCE9; ISSN: 1058-725X
Document Type
Journal
Language
English
Abstract
The electrooptical properties of poly(phenylenevinylene-alt-N-hexyl-carbazolevinylene), (Poly(PPV-N-hexyl)Cvz)], poly[1',4'-phenylene-1'',4''-(2''-ethylhexyloxy)]phenylene-2,5-(1'',4''-phenylene)-1,3,4- oxadiazolyl](PPEPPO) and their blends were characterized. The photoluminescence and electroluminescence spectra of the blend films composed of Poly(PPV-N-hexyl)Cvz] and PPEPPO were mainly contributed from the luminescence of Poly(PPV-N-hexyl)Cvz] even at the Poly(PPV-N-hexyl)Cvz] ratios. The markably enhanced EL efficiency was observed as the ratio of PPEPPO increased. As the ratio of PPEPPO was increased from 50 to 83%, the EL emission was changed from green to blue color.
Hit Structure

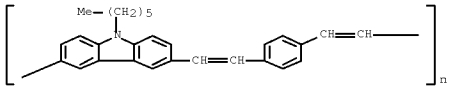
CAS Registry Number
315701-21-4 CAPLUS

Chemical or Trade Name
Poly[(9-hexyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)



CAS Registry Number
315701-21-4 CAPLUS

Chemical or Trade Name
Poly[(9-hexyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

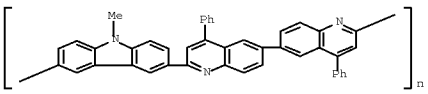


OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L38 ANSWER 99 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2000:580052 CAPLUS Full text
Document Number
133:267468
Title
Multicolor emission and tunable electroluminescence from blends of conjugated polymers
Author(s)/Inventor
Mesker, Kathleen; Liu, Liangde; Janekhe, Samson A.
Patent Assignee/Corporate Source
Department of Chemical Engineering, University of Rochester, Rochester, NY, 14627-0166, USA
Source
Polymeric Materials Science and Engineering (2000), 83, 208-209 CODEN: PMSEDG; ISSN: 0743-0515
Document Type
Journal
Language
English
Abstract
Upon both photo- and electronic excitation, blends of two polyquinolines emit light whose spectrum is not simply a superposition of the spectra of the two individual polymers. A feature arises at considerably high energy that does not correspond to the luminescence of thin films of either original polymer.
Hit Structure

CAS Registry Number
397143-71-6 CAPLUS

Chemical or Trade Name
Poly[(9-methyl-9H-carbazole-3,6-diyl)(4,4'-diphenyl[6,6'-biquinoline]-2,2'-diyl)] (9CI) (CA INDEX NAME)

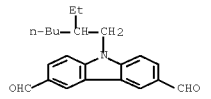


OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 100 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2000:546267 CAPLUS Full text
Document Number
133:267195
Title
Highly Photoluminescent and Blue-Green Electroluminescent Polymers. New Silyl- and Alkoxy-Substituted Poly(p-phenylenevinylene) Related Copolymers Containing Carbazole or Fluorene Groups
Author(s)/Inventor
Ahn, Taek; Song, Seung-Yong; Shim, Hong-Ku
Patent Assignee/Corporate Source
Center for Advanced Functional Polymers, Department of Chemistry and School of Molecular Science (BK 21), Korea Advanced Institute of Science and Technology, Taejon, 305-701, S. Korea
Source
Macromolecules (2000), 33(16), 6764-6771 CODEN: MAMOBX; ISSN: 0024-9297
Document Type
Journal
Language
English
Abstract
A series of silyl- and alkoxy-substituted poly(p-phenylenevinylene) related copolymers containing carbazole and fluorene groups, poly[9,9-n-dihexyl-2,7-fluorenediylvinylene-alt-2,5-bis(trimethylsilyl)-p-phenylenevinylene] (PFBTS-PPV), poly[9-ethylhexyl-3,6-carbazolevinylene- alt-2,5-bis(trimethylsilyl)-p-phenylenevinylene] (PCBTS-PPV), poly[9,9-dihexyl-2,7-fluorenediylvinylene-alt-2-methoxy-5-(2- ethylhexyloxy)-p-phenylenevinylene] (PFMEH-PPV), and poly[N-ethylhexyl-3,6-carbazolevinylene-alt-2-methoxy-5-(2-ethylhexyloxy)-p-phenylenevinylene] (PCMEH-PPV), have been synthesized through the well-known Wittig polycondensation reaction. The synthesized polymers were completely soluble in common organic solvents and exhibited good thermal stability up to 400°. They showed UV-vis absorbance and photoluminescence (PL) in the ranges of 385-430 and 480-540 nm, resp. The maximum emission peaks of dialkoxy-substituted PCMEH-PPV and PFMEH-PPV appeared at 520 and 540 nm, resp., which were both blue-shifted about 55-75 nm compared to that of MEH-PPV. Especially, PCBTS-PPV and PFBTS-PPV showed much more blue-shifted emission maximum peaks at 480 and 495 nm corresponding to the blue and greenish-blue lights, resp. Although PCBTS-PPV and PFBTS-PPV consist of conjugated segments without any kinked linkages, they showed far more blue-shifted emissions compared with other PPV related copolymers due to little electron-donating effect of the silyl substituent. Moreover, PFBTS-PPV and PCBTS-PPV showed extremely high PL efficiencies. Surprisingly, the PLeff (F = 0.81) of PFBTS-PPV is one of the highest values among the currently reported solid film PLeff of PPV derivs. The single-layer light-emitting diode was fabricated in the configuration of ITO (indium-tin oxide)/polymer/Al. Electroluminescence (EL) maxima of PCBTS-PPV and PFBTS-PPV were shown at 480 and 500 nm, resp., each corresponding to the blue and greenish-blue emission. The measurement of current vs. elec. field strength showed the threshold biases of PCBTS-PPV and PFBTS-PPV to be about 1.6 × 106 and 1.2 × 106 V/m, and PCBTS-PPV and PFBTS-PPV showed 13 and 32 times higher relative EL quantum efficiencies compared to that of MEH-PPV.
Hit Structure

CAS Registry Number
169051-20-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)

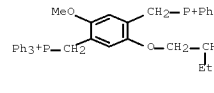


CAS Registry Number
395794-50-6 CAPLUS

Chemical or Trade Name
Phosphonium, [[3,5-bis(trimethylsilyl)-1,4-phenylene]bis(methylene)]bis(triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

CRN 169051-20-1
CMF C23 H25 N O2



CM
2

CRN 141960-54-9
CMF C50 H54 P2 Si2 . 2 Br

●2 Br⁻

CAS Registry Number
395794-54-7 CAPLUS

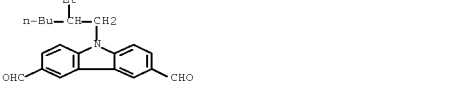
Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl(2,5-bis(trimethylsilyl)-1,4-phenylene)-1,2-ethenediyl] (9CI) (CA INDEX NAME)

CAS Registry Number
395794-49-0 CAPLUS

Chemical or Trade Name
Phosphonium, [[3-[(2-ethylhexyl)oxy]-5-methoxy-1,4-phenylene]bis(methylene)]bis[triphenyl-, dichloride, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

CRN 169051-20-1
CMF C23 H25 N O2



CM
2

CRN 141960-51-6
CMF C53 H56 O2 P2 . 2 Cl

●2 Cl⁻

OS.CITING REF COUNT: 96 THERE ARE 96 CAPLUS RECORDS THAT CITE THIS RECORD (97 CITINGS)

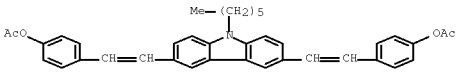
L38 ANSWER 101 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2000:532774 CAPLUS FullNext
Document Number
133:120645
Title
Luminescent group-containing diacetylene-based polymers,and their use in electroluminescence devices
Author(s)
Kim, Chung Up; Cho, Hyung Nam; Kim, Tong Yong; Kim, Young Chul; Hon, Jae Min; Kim, Jai Kyong; Yu, Je Ung
Patent Assignee/Corporate Source
Korea Institute of Science and Technology, S. Korea; Hanbi Chemical Corp.
Source
Jpn. Tokkyo Koho, 18 pp. CODEN: JTXXFF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 3046514	B1	20000529	JP 1999-45646	19990224
JP 2000212486	A	20000802		
KR 2000050907	A	20000905	KR 1999-1056	19990115
US 6344286	B1	20020205	US 1999-376126	19990819

Abstract
The polymers are made from diacetylene compds. which have groups derived from fluorene, 2,7-di(hydroxyphenylethenyl)fluorene, 2,7-di(hydroxyphenylfluorene, 1,4-di(hydroxyphenylethenyl)benzene, 3,6-di(hydroxyphenylethenyl)carbazole, or their substituted analogs. Electroluminescent devices can be made from a blend of the polymers and other polymers. Thus, bubbling O gas to a mixture of 2,7-diethynyl-9,9-di-n-hexylfluorene 1.52, CuCl 0.10 and N,N,N',N'-tetramethylethylenediamine 1.50 g in 20 mL chlorobenzene at room temperature for 1 h, precipitating the resulting viscous product with 2.0N HCl and working up gave a polymer.
Hit Structure

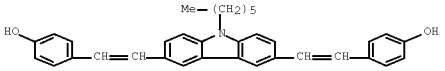
CAS Registry Number
205142-93-0 CAPLUS

Chemical or Trade Name
Phenol, 4,4'-[(9-hexyl-9H-carbazole-3,6-diyl)di-2,1-ethenediyl]bis-, diacetate (ester) (9CI) (CA INDEX NAME)



CAS Registry Number
205142-95-2 CAPLUS

Chemical or Trade Name
Phenol, 4,4'-[(9-hexyl-9H-carbazole-3,6-diyl)di-2,1-ethenediyl]bis- (9CI) (CA INDEX NAME)



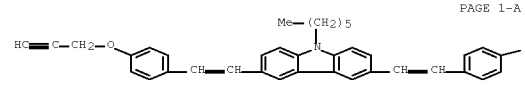
CAS Registry Number
205143-00-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-hexyl-3,6-bis[2-[4-(2-propynyloxy)phenyl]ethenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM
1

CRN 205142-97-4
CMF C40 H37 N O2

PAGE 1-A

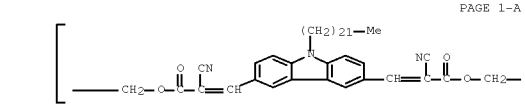


L38 ANSWER 102 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2000:527604 CAPLUS FullNext
Document Number
133:322581
Title
The photoluminescent and electroluminescent properties of cyclic carbazole oligomers
Author(s)
Maruyama, Sumio; Suzuki, Hironori; Tao, Xu-tang; Wada, Tatsuo; Sasabe, Hiroyuki; Miyata, Seizo; Kamata, Toshihide
Patent Assignee/Corporate Source
The Institute of Physical and Chemical Research (RIKEN), Saitama, 351-0198, Japan
Source
Physical Chemistry Chemical Physics (2000), 2(16), 3565-3569 CODEN: PPCPFQ, ISSN: 1463-9076
Document Type
Journal
Language
English
Abstract
The emission properties of cyclic carbazole-oligomers are described. The photoluminescent spectra of these cyclic oligomers excited by 350 nm as an excitation wavelength in chloroform have been measured. The emission properties of o-xylene-derived cyclic dimer were different from those of p- and/or m-xylene-derived cyclic dimers although they have the similar molar absorption coeffs. and structures. The electroluminescent properties are also described.
Hit Structure

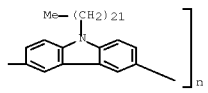
CAS Registry Number
251795-29-9 CAPLUS

Chemical or Trade Name
Poly[(9-docosyl-9H-carbazole-3,6-diyl)methylene oxy(2-cyano-1-oxo-3-propene-1,3-diyl)-(9-docosyl-9H-carbazole-3,6-diyl)(2-cyano-3-oxo-1-propene-1,3-diyl)oxymethylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: ? THERE ARE ? CAPLUS RECORDS THAT CITE THIS RECORD (? CITINGS)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L38 ANSWER 103 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2000:414760 CAPLUS FullNext
Document Number
133:322370
Title
Hyper-structured photonic molecules: hyperbranched polymers and oligomers
Author(s)
Wada, Tatsuo; Gunji, Atsushi; Imase, Yoshihiro; Zhang, Yadong; Kimura-Suda, Hiromi; Tao, Xu Tang; Sasabe, Hiroyuki
Patent Assignee/Corporate Source
Frontier Research Program, The Institute of Physical and Chemical Research (RIKEN), Saitama, 351-0198, Japan
Source
MCLC S&T, Section B: Nonlinear Optics (1999), 22(1-4), 183-188 CODEN: MCLOEB; ISSN: 1058-7268
Document Type
Journal
Language
English
Abstract
We have developed novel multifunctional carbazole oligomers and hyperbranched polymers. Carbazole oligomers show better photorefractive performance than those of main-chain polymers and provide mol.-level tuning. In order to merge the advantages for oligomers and polymers, hyperbranched polymers with oligomer units are prepared. This new hyperbranched polymer shows red-shifted fluorescence which can be applied to multifunctional electroluminescent materials as a new class of hyper-structured photonic mols.
Hit Structure

CAS Registry Number
181949-87-5 CAPLUS

Chemical or Trade Name
Propanedinitrile, 2,2'-[(9-tetradecyl-9H-carbazole-3,6-diyl)bis[2,1-ethynediyl(9-tetradecyl-9H-carbazole-6,3-diyl)methylidyne]]bis- (9CI) (CA INDEX NAME)

PAGE 1-B

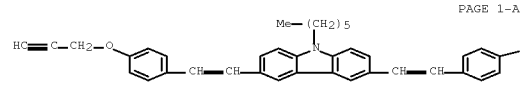
CAS Registry Number
205143-02-4 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-hexyl-3,6-bis[2-[4-(3-propynyloxy)phenyl]ethenyl]-, polymer with 9,9-di-hexyl-2,7-bis[2-[4-(2-propynyloxy)phenyl]ethenyl]-9H-fluorene (9CI) (CA INDEX NAME)

CM
1

CRN 205142-97-4
CMF C40 H37 N O2

PAGE 1-A

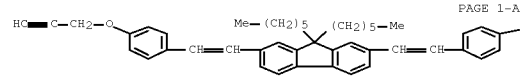


PAGE 1-B

CM
2

CRN 205142-96-3
CMF C47 H50 O2

PAGE 1-A

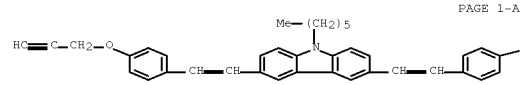


PAGE 1-B

CAS Registry Number
205143-97-4 CAPLUS

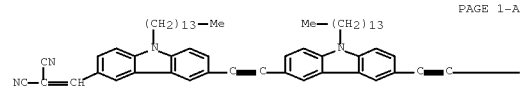
Chemical or Trade Name
9H-Carbazole, 9-hexyl-3,6-bis[2-[4-(2-propyn-1-yloxy)phenyl]ethenyl]- (CA INDEX NAME)

PAGE 1-A

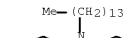


PAGE 1-B

PAGE 1-A

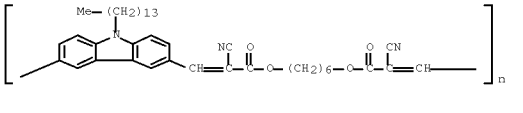


PAGE 1-B



CAS Registry Number
183375-93-6 CAPLUS

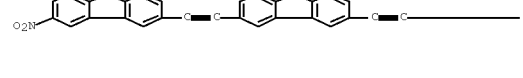
Chemical or Trade Name
Poly(9-tetracosyl-9H-carbazole-3,6-diyl)(2-cyano-3-oxo-1-propene-1,3-diyl)oxy-1,6-hexanediyloxy(2-cyano-1-oxo-3-propene-1,3-diyl) (9CI) (CA INDEX NAME)



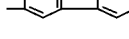
CAS Registry Number
188745-15-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis[9-(6-nitro-9-tetradecyl-9H-carbazol-3-yl)ethynyl]-9-tetradecyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

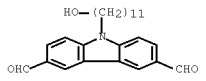


CAS Registry Number
174202-10-0 CAPLUS

Chemical or Trade Name
Acetic acid, cyano-, methyl ester, polymer with 9-(11-hydroxyundecyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

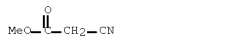
CN
1

CRN 174302-80-3
CMF C25 H31 N O3



CN
2

CRN 105-34-0
CMF C4 H5 N O2



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

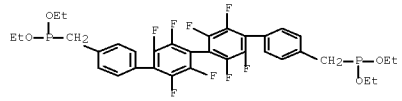
L38 ANSWER 104 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2000:377773 CAPLUS Full-text
Document Number
133:151023
Title
Synthesis and properties of new light- emitting polymers containing fluorinated tetraphenyl units.
Author(s)/Inventor
Hwang, Do-Hoon; Song, Seung Yong; Ahn, Taek; Chu, Hye Yong; Do, Lee-Mi; Kim, Seong Hyun; Shim, Hong-Ku; Zyung, Taehyoung
Patent Assignee/Corporate Source
Telecommunication Basic Research Laboratory, ETRI, Taejon, 305-350, S. Korea
Source
Synthetic Metals (2000), 111-112, 465-467 CODEN: SYMEDZ; ISSN: 0379-6779
Document Type
Journal
Language
English
Abstract
Fully conjugated blue light-emitting polymers based on fluorinated tetra-Ph units and dialkoxybenzene, carbazole, and fluorene arylenevinylene units were prepared. The polymers were prepared from (4-H-H-[(diethoxyphosphino)methyl]phenyl)-2,3,5,6- tetrafluorophenyl)(phenyl)methyl) diethoxy phosphine and the corresponding dialdehyde monomers via the Horner reaction. The polymers are soluble in common organic solvents and thermally stable up to 300°. The photoluminescence (PL) peak wavelength of the polymers varied from 400 to 465 nm, depending on the polymer structure. Single-layer electroluminescent (EL) test device structures using the polymers were fabricated. Light emission becomes visible between 12 and 22 V, depending on the device structure.
Hit Structure

CAS Registry Number
367101-31-1 CAPLUS

Chemical or Trade Name
Phosphonous acid, [(2',3'',3',3'',5',5'',6',6''-octafluoro[1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diyl)bis(methylene)]bis-, tetraethyl ester, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

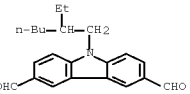
CM
1

CRN 367101-30-0
CMF C34 H30 F8 O4 P2



CM
2

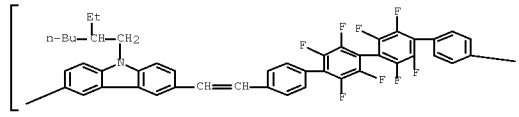
CRN 169051-20-1
CMF C22 H25 N O2



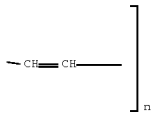
CAS Registry Number
367101-32-2 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl(2',3'',3',3'',5',5'',6',6''-octafluoro[1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diyl)-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

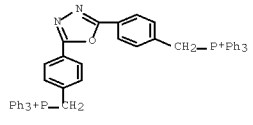
L38 ANSWER 105 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2000:377753 CAPLUS Full-text
Document Number
133:135662
Title
Efficient and blue light-emitting polymers composed of conjugated main chain
Author(s)/Inventor
Ahn, Hong-Ku; Song, Seung-Yong; Ahn, Taek
Patent Assignee/Corporate Source
Department of Chemistry, Korea Advanced Institute of Science and Technology, Taejon, 305-701, S. Korea
Source
Synthetic Metals (2000), 111-112, 409-412 CODEN: SYMEDZ; ISSN: 0379-6779
Document Type
Journal
Language
English
Abstract
Poly[o(m,p)-phenylenevinylene-alt-2,5-bis(trimethylsilyl)-p-phenylenevinylene]-o(m,p)-PSTMS-PPV and related derivs. were prepared and their light-emitting properties were studied. The peaks of the photoluminescence spectra of o-PSTMS-PPV, o-P-PSTMS-PPV, and m-PSTMS-PPV were at 465, 470, and 440, resp. Fully conjugated polymers composed of both electron-transporting oxadiazole and hole-transporting carbazole moieties, PPOX-CAR and PMOX-CAR were also prepared. The electroluminescence peaks of those polymers occurred at 465 and 450 nm, resp. Maximum brightness of a test device comprising Al/PPOX-CAR/ITO/ single layer was 500 cd/m2 at 20 V.
Hit Structure

CAS Registry Number
331615-58-4 CAPLUS

Chemical or Trade Name
Phosphonium, 1,1'-[1,3,4-oxadiazole-2,5-diylbis(4,1-phenylenemethylene)]bis[1,1,1-triphenyl-, bromide (1:2), polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (CA INDEX NAME)

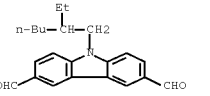
CM
1

CRN 331615-56-1
CMF C53 H43 N3 O P8 . 2 Br



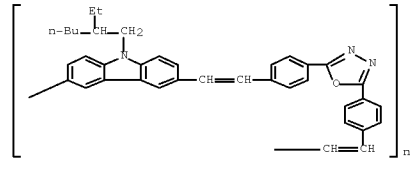
CM
2

CRN 169051-20-1
CMF C22 H25 N O2



CAS Registry Number
331615-60-7 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene-1,3,4-oxadiazole-2,5-diyl-1,4-phenylene-1,2-ethenediyl] (CA INDEX NAME)

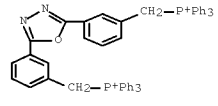


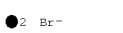
CAS Registry Number
331615-59-9 CAPLUS

Chemical or Trade Name
Phosphonium, [1,3,4-oxadiazole-2,5-diylbis(3,1-phenylenemethylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

CRN 331615-58-8
CMF C53 H43 N3 O P8 . 2 Br





CM
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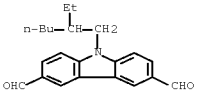
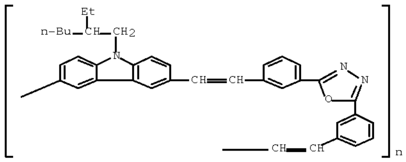
CRN 169051-20-1
CMF C22 H25 N O2



CAS Registry Number
331615-61-0 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,3-ethenediyl-1,3-phenylene-3,4-oxadiazole-2,5-diyl-1,3-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L38 ANSWER 106 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2000:348821 CAPLUS Full-text

Document Number
133:89897

Title
Synthesis and light emitting properties of new polyquinolines with a pendent 4'-octyloxybiphenyl group

Author/Inventor
Kim, Jong Lae; Kim, Jai Kyeong; Cho, Hyun Nam; Kim, Dong Young; Hong, Sung Il

Patent Assignee/Corporate Source
Department of Fiber & Polymer Science, Seoul National University, Seoul, 151-742, S. Korea

Source
Macromolecular Chemistry and Physics (2000), 201 (7), 768-773 CODEN: MCHPES; ISSN: 1022-1352

Document Type
Journal

Language
English

Abstract
Two novel AA-BB type polyquinolines with pendent 4'-octyloxybiphenyl groups (P1, P2) were synthesized successfully by the Friedlander polyquinoline synthesis and their thermal, luminescent and electrochem. properties were investigated. These polymers were soluble in convenient solvents and thermally stable showing initial decomposition temps. of >405°. EL spectra of P1 and P2 lie in the green region (530 nm) and yellow region (574, 470 nm), resp. The turn on voltages of the diodes (ITO/polyquinoline/Al) were 19 V for P1 and 9 V for P2. The quantum efficiencies of these LEDs, with each polymer as the emissive layer, were 0.0076% and 0.0011% photons per electron, resp.

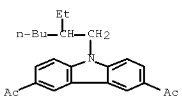
Hit Structure

CAS Registry Number
280578-29-2 CAPLUS

Chemical or Trade Name
Ethanone, 1,1'-[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]bis-, polymer with (4,4'-diamino[1,1'-biphenyl]-3,3'-diyl)bis[[4'-(octyloxy)[1,1'-biphenyl]-4-yl]methanone] (9CI) (CA INDEX NAME)

CM 1

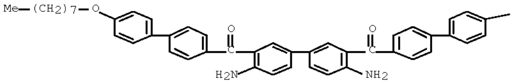
CRN 280578-28-1
CMF C24 H29 N O2



CM 2

CRN 280578-26-9
CMF C54 H60 N2 O4

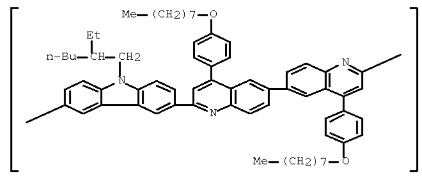
PAGE 1-A



PAGE 1-B

CAS Registry Number
280578-31-6 CAPLUS

Chemical or Trade Name
Poly[[4,4'-bis[4-(octyloxy)phenyl][6,6'-biquinoline]-2,2'-diyl][9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L38 ANSWER 107 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2000:293448 CAPLUS Full-text

Document Number
133:50793

Title
Electrogenerated Chemiluminescence from Derivatives of Aluminum Quinolate and Quinacridones: Cross-Reactions with Triarylamines Lead to Singlet Emission through Triplet-Triplet Annihilation Pathways

Author/Inventor
Gross, E. M.; Anderson, J. D.; Slaterbeck, A. F.; Thayumanavan, S.; Barlow, S.; Zhang, Y.; Marder, S. R.; Hall, H. K.; Nabor, M. Flore; Wang, J.-F.; Mash, E. A.; Armstrong, N. R.; Wightman, R. M.

Patent Assignee/Corporate Source
Departments of Chemistry, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599, USA

Source
Journal of the American Chemical Society (2000), 122(20), 4972-4979 CODEN: JACSAT; ISSN: 0002-7863

Document Type
Journal

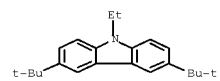
Language
English

Abstract
Solution electrogenerated chemiluminescence (ECL) was evaluated for mols. of interest for organic light-emitting diodes (OLEDs), using high-frequency voltage pulses at a microelectrode. Radical cations of different energies were electrogenerated from triarylamine hole-transport materials (x-TPD), in the presence of radical anions of a high electron affinity sulfonamide derivative of tris(8-hydroxyquinoline)aluminum (Al(qs)3), or a bis(isoamyl) derivative of quinacridone (DIQA). The resultant emission was from the excited singlet states 1Al(qs)3* or 1DIQA*, the same excited state produced in OLEDs based on these mols. In solution, the majority of the reaction pairs had insufficient energy to populate 1Al(qs)3* or 1DIQA* directly, but could form the triplet states 3Al(qs)3* or 3DIQA*. The reaction order and the temporal response of the emission were consistent with subsequent formation of the excited singlet states via triplet-triplet annihilation (TTA). For reactions with a low excess Gibbs free energy to form the triplet state (ΔTG), the efficiency increased exponentially with an increase in driving force (increase in oxidation potential of x-TPD), then reached a plateau. At the maximum, the efficiencies for formation of 1Al(qs)3* or 1DIQA* via the TTA route reach as high as a few percent. The computed energetics of these reactions suggest that similar light-producing electroluminescent reactions, proceeding via triplet formation, could also occur in condensed phase organic thin films.

Hit Structure

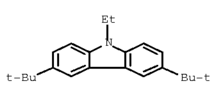
CAS Registry Number
51545-40-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(1,1-dimethylethyl)-9-ethyl- (CA INDEX NAME)



CAS Registry Number
57102-34-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis(1,1-dimethylethyl)-9-ethyl-, radical ion(1+) (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 65 THERE ARE 65 CAPLUS RECORDS THAT CITE THIS RECORD (66 CITINGS)

L38 ANSWER 108 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2000:271375 CAPLUS Full-text

Document Number
133:35876

Title
Novel silicon-based copolymers for tunable light-emitting diodes: synthesis and characterization

Author/Inventor
Jung, S.-H.; Kim, H. K.

Patent Assignee/Corporate Source
Department of Polymer Science and Engineering, Hannam University, Taejon, 306-791, S. Korea

Source
Journal of Luminescence (2000), 87-89, 51-55 CODEN: JLUMA8; ISSN: 0022-2313

Document Type
Journal

Language
English

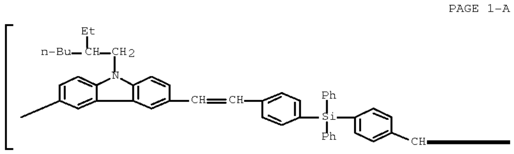
Abstract
Si-based alternating copolymers soluble in organic solvents were synthesized by Heck reaction to use as electroluminescent materials. They could spin cast onto various substrates to give highly transparent homogeneous thin films. The present polymers exhibit UV-visible strong absorption bands around 325-380 nm, which corresponds to the π-π* transition of the π-conjugated segment, since the π-conjugated system is interrupted by organosilicon units. Their photoluminescence spectra appeared around 440-476 nm in the blue emission region. The multi-layered light-emitting diodes of a Al/LiAl/SiPhPVK(poly(3,6-diformyl-N-(2-ethylhexyl)- carbazolyl) tetraphenylsilane)/PANI(polyaniline) /ITO glass and a Al/LiAl/SiPhFPV(poly(9,9-dihexyl-fluorenyl)tetraphenylsilane)/ITO glass are fabricated. The threshold voltage is at 6-12 V from the I-V curve. The electroluminescence spectra of the SiPhFPV give the highest peak in the blue EL emissive band at 486 nm, when the operating voltage of 6 V is applied. For the SiPhPVK containing a carbazole unit, the EL spectrum of the polymer shows the highest peak in the blue EL emissive band at 467 nm as well as an addnl. strong emissive band in the yellow region, when the operating voltage of 11 V is applied.

Hit Structure

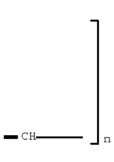
CAS Registry Number
189575-99-3 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(diphenylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

L38 ANSWER 109 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
2000:203713 CAPLUS Full-text

Document Number
132:334933

Title
Synthesis and electro-optical properties of electroluminescent polymers containing carbazole unit

Author/Inventor
Jin, Sung-Ho; Sun, Yang-Kook; Sohn, Byung-Hee; Kim, Woohong

Patent Assignee/Corporate Source
Polymer Laboratory, Samsung Advanced Institute of Technology(SAIT), Taejon, 103-12, S. Korea

Source
European Polymer Journal (2000), 36(5), 957-963 CODEN: EUPJAG; ISSN: 0014-3057

Document Type
Journal

Language
English

Abstract
A new series of the processable emissive polymers containing dialkylphenylenevinylene (R2PV) and N-ethylcarbazolediyl (CBz) units was synthesized by Wittig polymerization. The resulting polymers are soluble in organic solvents and spin-cast to make thin films. A light- emitting diode (LED) was fabricated by sandwiching the emissive polymers between indium-tin oxide and aluminum electrodes. Strong emissions at 460 and 490 nm were observed from the devices made with the synthesized polymers. The polymers have a strong absorption band at around 310 nm, which is due to the π-π* transition of the conjugated segments. I-V curves show typical rectifying diode characteristics. The forward bias turn-on voltage for the LEDs are 5 V for poly(dihexylPV-CBz) and 10 V for poly(methyl-2-ethylhexylPV-CBz), resp.

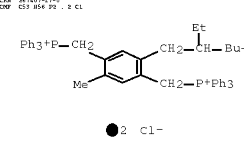
Hit Structure

CAS Registry Number
267407-18-1 CAPLUS

Chemical or Trade Name
Phosphonium, [[2-(2-ethylhexyl)-5-methyl-1,4-phenylene]bis(methylene)]bis[triphenyl-, dichloride, polymer with 9-ethyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

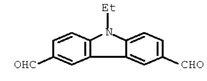
CM 1

CRN 267407-17-0
CMF C53 H56 P2 . 2 Cl



CM 2

CRN 70207-46-4
CMF C16 H13 N O2

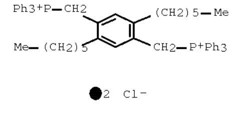


CAS Registry Number
224558-12-7 CAPLUS

Chemical or Trade Name
Phosphonium, [(2,5-dihexyl-1,4-phenylene)bis(methylene)]bis[triphenyl-, dichloride, polymer with 9-ethyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

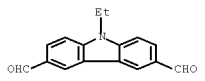
CM 1

CRN 224558-07-0
CMF C56 H62 P2 . 2 Cl



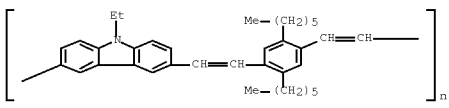
CM
2

CRN 70207-46-4
CMF C16 H13 N O2



CAS Registry Number
265124-41-2 CAPLUS

Chemical or Trade Name
Poly[(9-ethyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl(2,5-dihexyl-1,4-phenylene)-1,2-ethenediyl] (9CI) (CA INDEX NAME)

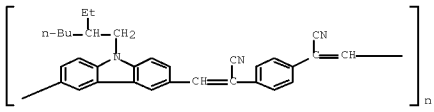


OS.CITING REF COUNT: 23 THERE ARE 23 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)

L38 ANSWER 110 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2000:126906 CAPLUS Full-text
Document Number
132:286091
Title
Characteristics of organic electroluminescent devices using polypyrrole conducting layer and undoped conjugated polymer layer
Author(s)/Inventor
Park, J.-W.; Lee, J.-H.; Lee, J.-Y.; Kho, S.-I.; Kim, T.-W.
Patent Assignee/Corporate Source
Department of Polymer Engineering, Chungju National University, Chungju, Chungbuk, S. Korea
Source
Thin Solid Films (2000), 363(1,2), 259-262 CODEN: THSFAP; ISSN: 0040-6090
Document Type
Journal
Language
English
Abstract
The authors observed EL properties based on poly(3,6-N-2-ethylhexylcarbazolyl-cyanoleaphthalidene) (PECCP) and PECCP/Alq3 (> 5 Å/cm) on top of rough ITO (surface resistance: <7 Ω/ box.). The ITO/PECCP/Alq3/Al device shows relatively high luminance efficiency, (0.17 lm/W), because of the PECCP layer. The polypyrrole (PPy) conducting layer is working on improving I-V characteristics of PECCP/Alq3 small mol. EML and PECCP EML system on ITO which has a rough surface of >1000 Å peak to peak level. In the PECCP EML device, when PPy is layered on top of ITO, the turn-on voltage is lowered from 15 to 9 V.
Hit Structure

CAS Registry Number
193446-73-4 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)(2-cyano-1,2-ethenediyl)-1,4-phenylene(1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L38 ANSWER 111 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2000:126905 CAPLUS Full-text
Document Number
132:306824
Title
Blue electroluminescence in blend of polymers containing carbazole and 1,3,4-oxadiazole units
Author(s)/Inventor
Jin, Sung-Ho; Kim, Woo-Hong; Song, In-Sung; Kwon, Soon-Ki; Lee, Kwang-Sik; Han, Eun-Mi
Patent Assignee/Corporate Source
Polymer Laboratory, Samsung Advanced Institute of Technology (SAIT), Moonji-dong, Yusung-gu, Taejon, S. Korea
Source
Thin Solid Films (2000), 363(1,2), 255-258 CODEN: THSFAP; ISSN: 0040-6090
Document Type
Journal
Language
English
Abstract
The electo-optical properties of poly(2,5-dihexyl-phenylene-alt-N-ethyl-3,6-carbazole vinylene) (PDPCVz) and poly(1',4'-phenylene-1',4'-(2''-(2''-ethylhexyloxy)phenylene-2,5-(1'',4''-phenylene)-1,3,4-oxadiazolyl) (PPEPO) were studied. The photoluminescence and electroluminescence spectra of PDPCVz-PPOPPD blend films are mainly due to the luminance of PDPCVz, even at low PDPCVz ratios. The blue electroluminescence was significantly enhanced by efficient energy transfer from the PPEPPO excited state which has a larger band gap, to PDPCVz with a smaller band gap. A field electroluminescent device with the blend as emitter and hole transport layer and tris-(8-hydroxyquinoline)aluminum Alq3 as the electron transport layer, and ITO and Al electrodes, showed significant improvements in charge injection and electroluminescence efficiency vs. PDPCVz devices.
Hit Structure

CAS Registry Number
204158-13-7 CAPLUS

Chemical or Trade Name
Phosphonium, [(2,5-dihexyl-1,4-phenylene)bis(methylene)]bis[triphenyl-, dichloride, polymer with 9-ethyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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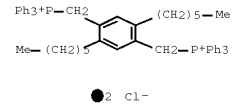
CRN 204558-07-0
CMF C54 H63 P2 . 2 Cl



CM
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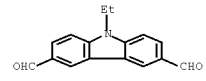
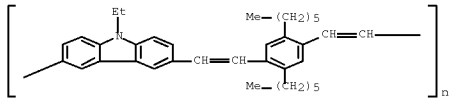
CRN 70207-46-4
CMF C16 H13 N O2



CAS Registry Number
265124-41-2 CAPLUS

Chemical or Trade Name
Poly[(9-ethyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl(2,5-dihexyl-1,4-phenylene)-1,2-ethenediyl] (9CI) (CA INDEX NAME)

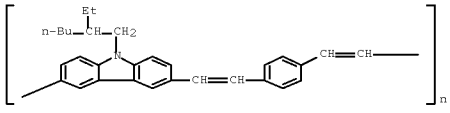


OS.CITING REF COUNT: 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)

L38 ANSWER 112 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
2000:126867 CAPLUS Full-text
Document Number
132:306300
Title
The photo- and electroluminescence of some novel light emitting copolymers
Author(s)/Inventor
Bai, F.; Zheng, M.; Yu, G.; Zhu, D.
Patent Assignee/Corporate Source
Laboratory of Organic Solids, Institute of Chemistry, Chinese Academy of Sciences, Beijing, Peop. Rep. China
Source
Thin Solid Films (2000), 363(1,2), 118-121 CODEN: THSFAP; ISSN: 0040-6090
Document Type
Journal
Language
English
Abstract
A new class of novel high-efficiency light-emitting nitrogen-containing PPV-related copolymers which have hole transfer moieties such as triphenylamine (TPA) and alkylcarbazole units, and conjugated aromatic units such as 4,4'-biphenylene, 1,4-phenylene, 1,4- or 1,5-naphthylene and 9,10-anthrylene, was designed and synthesized by the well-known Wittig-Horner reaction. The optical and elec.-properties were examined. The resulting alternating copolymers were highly soluble in common organic solvents, with good film-forming properties, and high fluorescence quantum yields and also emit blue/green lights when used as the active layer of LEDs.
Hit Structure

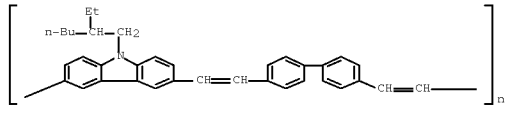
CAS Registry Number
265126-14-5 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)



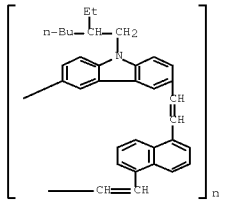
CAS Registry Number
265126-15-6 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl(1,1'-biphenyl)-4,4'-diyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)



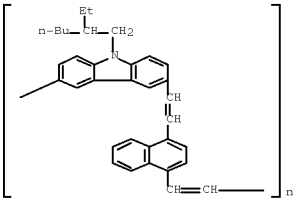
CAS Registry Number
265126-16-7 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,5-naphthalenediyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)



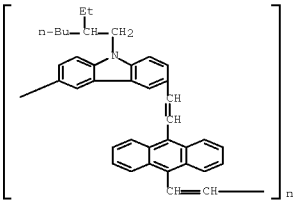
CAS Registry Number
265126-17-8 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-naphthalenediyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)



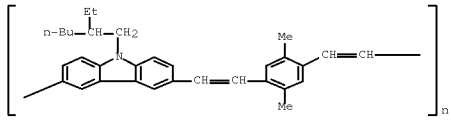
CAS Registry Number
265126-18-9 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-9,10-anthracenediyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)



CAS Registry Number
265126-19-0 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl(2,5-dimethyl-1,4-phenylene)-1,2-ethenediyl] (9CI) (CA INDEX NAME)



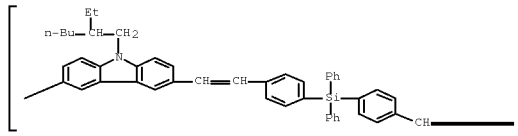
OS.CITING REF COUNT: 37 THERE ARE 37 CAPLUS RECORDS THAT CITE THIS RECORD (36 CITINGS)

L38 ANSWER 113 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1999:535013 CAPLUS FullNext
Document Number
131:357619
Title
Blue electroluminescence from novel silicon-based copolymers at low operating voltages
Author(inventor
Kim, Hwan Kyu; Park, Jin-Sung; Kim, Ki-Dong; Jung, Sung-Hyun; Jeoung, Sae Chae; Kim, Yong Hee; Kim, Dongho
Patent Assignee/Corporate Source
Department of Macromolecular Science, Hannam University, Taejon, 306-791, S. Korea
Source
Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (1999), 327, 175-180 CODEN: MCLCE9; ISSN: 1058-725X
Document Type
Journal
Language
English
Abstract
Novel silicon-based copolymers show the UV-visible-strong absorption bands around 347-387 nm. Their maximum photoluminescence (PL) wavelengths for silicon-based copolymers appeared around 420-440 nm in the blue region. The present copolymers with a relatively short π-conjugation length exhibit blue light-emitting diodes (LED) at the low operating voltages, due to the reduction of the LUMO level in luminescent polymers by introducing silicon atoms in luminescent polymers as well as the d-orbital participation of silicon atoms.
Hit Structure

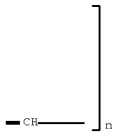
CAS Registry Number
169051-39-5 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(diphenylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CAS Registry Number
301745-67-7 CAPLUS

Chemical or Trade Name
Phosphonium, [(diphenylsilylene)bis(4,1-phenylenemethylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

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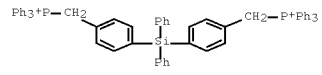
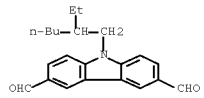
CRN 181645-95-2
CMF C62 H52 P2 Si . 2 Br



●2 Br⁻

CM
2

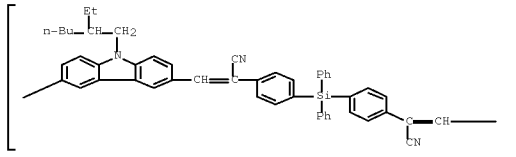
CRN 169051-20-1
CMF C33 H25 N O2



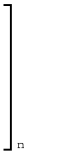
CAS Registry Number
250154-92-0 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)-1,4-phenylene(diphenylsilylene)-1,4-phenylene(1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A

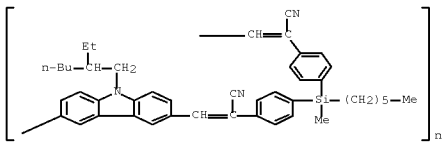


PAGE 1-B



CAS Registry Number
250154-93-1 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)-1,4-phenylene(1-cyano-1,2-ethenediyl)-1,4-phenylene(dimethylsilylene)] (9CI) (CA INDEX NAME)



CAS Registry Number
350134-96-4 CAPLUS

Chemical or Trade Name
Benzeneacetonitrile, 4,4'-(diphenylsilylene)bis-, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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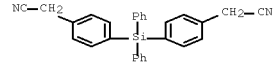
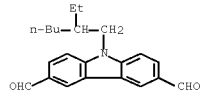
CRN 350134-96-4
CMF C26 H23 N2 Si



CM
2

CRN 169051-20-1
CMF C33 H25 N O2

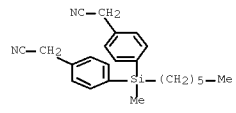


CAS Registry Number
350135-01-4 CAPLUS

Chemical or Trade Name
Benzeneacetonitrile, 4,4'-(hexylmethylsilylene)bis-, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

CRN 214901-43-6
CMF C23 H30 N2 Si



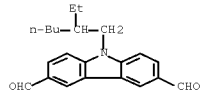
CM
2

CRN 169051-20-1

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)-1,4-phenylene(1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)

CAS Registry Number
250154-93-1 CAPLUS

CMF C33 H25 N O2



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L38 ANSWER 114 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1999:513731 CAPLUS FullNext
Document Number
131:272274
Title
Synthesis of cyclic oligomer having a low ionization potential
Author(s)/Inventor
Maruyama, Sumio; Hokari, Hirofumi; Tao, Xu-Tang; Gunji, Atsushi; Wada, Tatsuo; Satabe, Hiroyuki
Patent Assignee/Corporate Source
The Institute of Physical and Chemical Research (RIKEN), Saitama, 351-0198, Japan
Source
Chemistry Letters (1999), (8), 731-732 CODEN: CMLTAG; ISSN: 0366-7022
Document Type
Journal
Language
English
Abstract
Synthesis of cyclic oligomer having a low ionization potential (Ip) is described. Ip of this cyclic oligomer was determined as 5.05 eV, which is lowered than that of corresponding poly(3,6-ethynyl-9-tetradecylcarbazole) (5.24 eV). This result indicated that the cyclic oligomer would be new candidate for hole injection and/or transport material in organic light-emitting diodes.
Hit Structure

CAS Registry Number
345845-30-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl-, polymer with 3,6-diiodo-9-tetradecyl-9H-carbazole (CA INDEX NAME)

CM
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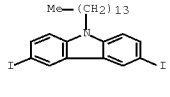
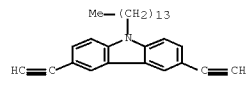
CRN 197060-64-7
CMF C26 H35 I2 N



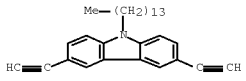
CM
2

CRN 188740-71-6
CMF C30 H37 N



CAS Registry Number
188740-71-6 CAPLUS

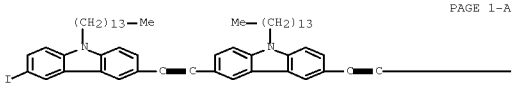
Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl- (CA INDEX NAME)



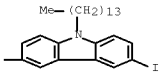
CAS Registry Number
345648-35-5 CAPLUS

Chemical or Trade Name
NH-Carbazole, 3,6-bis[3-(6-iodo-9-tetradecyl-9H-carbazol-3-yl)ethynyl]-9-tetradecyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



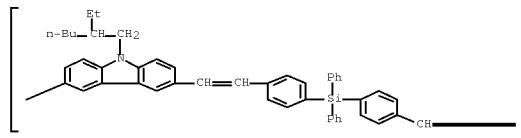
OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L38 ANSWER 115 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1999:456083 CAPLUS Full-text
Document Number
131:208685
Title
Blue electroluminescence from novel silicon-based copolymers at low operating voltages
Author(s)/Inventor
Falk, Jin-Sung; Kim, Ki-Dong; Jung, Sung-Hyun; Kim, Hwan Kyu; Jeoung, Sae Chae; Kim, Yong Hee; Kim, Dongho
Patent Assignee/Corporate Source
Department of Macromolecular Science, Hannam University, Taejon, 306-791, S. Korea
Source
Synthetic Metals (1999), 102(1-3), 1063-1064 CODEN: SYMEDZ; ISSN: 0379-6779
Document Type
Journal
Language
English
Abstract
Novel Si-based copolymers exhibit the ground-state absorption band maxima around 340-390 nm and their photoluminescence in blue region. The blue light-emitting diodes (LED) fabricated with the copolymers could be successfully operated at the considerable low voltages compared to those for other blocked PPV copolymers. The introduction of both Si and carbazole moieties into PPV main chain results in an interesting dependences of EL spectral feature on the operating voltage for LED. To know the origin of the dependence, the authors have studied PL and its excitation spectra of the Si-based copolymeric systems.
Hit Structure

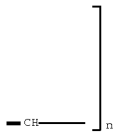
CAS Registry Number
109575-99-3 CAPLUS

Chemical or Trade Name
Poly[[9-(3-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(diphenylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

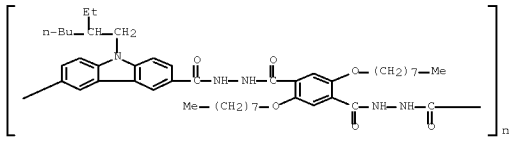


OS.CITING REF COUNT: ? THERE ARE ? CAPLUS RECORDS THAT CITE THIS RECORD (? CITINGS)

L38 ANSWER 116 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1999:436059 CAPLUS Full-text
Document Number
131:208257
Title
Spectroscopic and electrochemical study of a novel blue electroluminescent p-n diblock conjugated copolymer
Author(s)/Inventor
Meng, Hong; Chen, Zhi-Kuan; Huang, Wei
Patent Assignee/Corporate Source
Institute of Materials Research and Engineering (IMRE), National University of Singapore, Singapore, 119260, Singapore
Source
Journal of Physical Chemistry B (1999), 103(31), 6429-6433 CODEN: JPCBFK; ISSN: 1089-5647
Document Type
Journal
Language
English
Abstract
A novel p-n diblock copolymer, poly(N-(2'-ethylhexyl)-carbazole-3,6-diyl-1',3',4'-oxadiazole-2',5'-diyl-2',5'-dioctyloxy-1',4'-phenylene-1'',3'',4''-oxadiazole-2'',5''-diyl) (PCOPO) composed of an electron-rich moiety carbazole and an electron-deficient unit aromatic oxadiazole was synthesized aiming at balancing the abilities of conducting holes and electrons. Electrochem. analyses by cyclic voltammetry indicate that PCOPO can be reversibly n-doped and irreversibly p-doped. The cathodic sweep reveals that the reduction involves two-electron process with respect to the successive reduction of oxadiazole rings and carbazole moieties in the polymer chain. The highest occupied MOs (HOMO) and lowest unoccupied MOs (LUMO) energy levels of the polymer are estimated to be 5.60 and 2.66 eV from the onset of oxidation and reduction potentials, resp. The band gap energy of the polymer estimated by the electrochem. measurement (2.94 eV) is in good agreement with that from the optical method (2.82 eV). The photoluminescence (PL) of film samples shows that the polymer emits green-blue light (475 nm). The PL of solns. is concentration-dependent. In dilute solns., the PL emission is from the singlet exciton transition, whereas in the concentrated solns., it is mainly originated from excimers. The excimer formation is related to the incorporation of oxadiazole rings into the polymer backbone, which can enhance the interchain interactions. Both photophys. and electronic properties demonstrate that the polymer may be a promising candidate material for the fabrication of an efficient blue light-emitting device.
Hit Structure

CAS Registry Number
344076-30-4 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]carbonylhydrazinecarbonyl[2,5-bis(octyloxy)-1,4-phenylene]carbonylhydrazinecarbonyl] (9CI) (CA INDEX NAME)



CAS Registry Number
344076-29-1 CAPLUS

Chemical or Trade Name
1,4-Benzenedicarboxylic acid, 2,5-bis(octyloxy)-, dihydrazide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarbonyl dichloride (9CI) (CA INDEX NAME)

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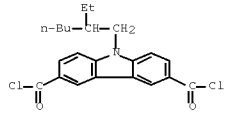
CRN 329636-00-6
CMF C22 H23 Cl2 N O2



CM
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CRN 215324-12-2
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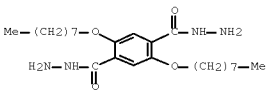
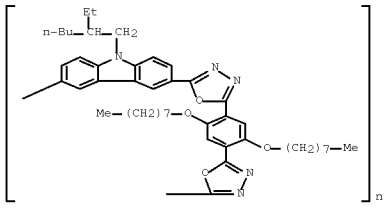


CAS Registry Number
344076-31-5 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,3,4-oxadiazole-2,5-diyl[2,5-bis(octyloxy)-1,4-phenylene]-1,3,4-oxadiazole-2,5-diyl] (9CI) (CA INDEX NAME)

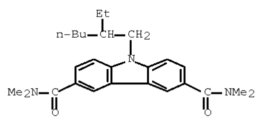


OS.CITING REF COUNT: 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)

L38 ANSWER 117 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1999:394317 CAPLUS Full-text
Document Number
131:243697
Title
Synthesis and characterization of a novel blue electroluminescent polymer constituted of alternating carbazole and aromatic oxadiazole units
Author/Inventor
Meng, Hong; Chen, Zhi-Kuan; Liu, Xiao-Ling; Lai, Yee-Hing; Chua, Soo-Jin; Huang, Wei
Patent Assignee/Corporate Source
Institute of Materials Research and Engineering (IMRE), National University of Singapore, Singapore
Source
Physical Chemistry Chemical Physics (1999), 1(13), 3123-3127 CODEN: PPCPFQ; ISSN: 1463-9076
Document Type
Journal
Language
English
Abstract
A polymer containing alternating carbazole and arylenebisoxadiazole units was prepared by polymerizing 2,5-bis(octyloxy)terephthaloyl hydrazide with 9-(2-ethylhexyl)-3,6-carbazoledicarbonyl chloride followed by cyclodehydration. The structure of the polymer was confirmed by FTIR, NMR, and elemental anal. The polymer is partially soluble in THF, CHCl3, xylene, and DMSO, and completely soluble in CHCl3 containing a small amount TFA. The optical and electronic properties of the polymer were investigated by UV-visible absorption and photoluminescence spectroscopy as well as cyclic voltammetry. The polymer films emit greenish-blue light (475 nm). The bandgap energy of the polymer was estimated optically (2.82 eV) and electrochem. (2.94 eV). Both p-doping and n-doping processes are observed in cyclic voltammetric investigations. The HOMO and LUMO energies of the polymer were estimated to be 5.60 and 2.66 eV, resp. The photophys. and electronic properties as well as the preliminary electroluminescent device result of the polymer demonstrate that it is a promising candidate material for the fabrication of a polymer light-emitting device.
Hit Structure

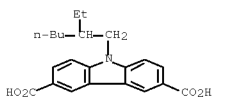
CAS Registry Number
229626-78-2 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxamide, 9-(2-ethylhexyl)-N3,N3,N6,N6-tetramethyl- (CA INDEX NAME)



CAS Registry Number
229626-79-3 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxylic acid, 9-(2-ethylhexyl)- (CA INDEX NAME)



CAS Registry Number
244036-29-1 CAPLUS

Chemical or Trade Name
1,4-Benzenedicarboxylic acid, 2,5-bis(octyloxy)-, dihydrazide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarbonyl dichloride (9CI) (CA INDEX NAME)

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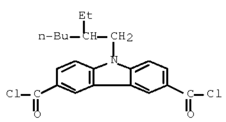
CRN 229626-80-6
CMF C22 H23 Cl2 N O2



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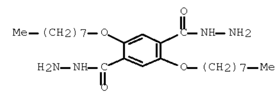
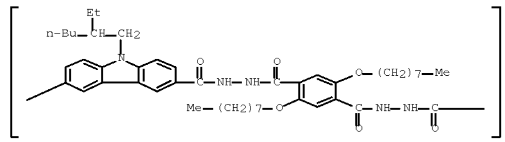
CRN 315324-12-2
CMF C24 H42 N4 O4



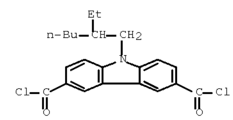
CAS Registry Number
244036-30-4 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]carbonylhydrazocarbonyl[2,5-bis(octyloxy)-1,4-phenylene]carbonylhydrazocarbonyl] (9CI) (CA INDEX NAME)



CAS Registry Number
229626-80-6 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarbonyl dichloride, 9-(2-ethylhexyl)- (CA INDEX NAME)



CAS Registry Number
244036-29-1 CAPLUS

Chemical or Trade Name
1,4-Benzenedicarboxylic acid, 2,5-bis(octyloxy)-, dihydrazide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarbonyl dichloride (9CI) (CA INDEX NAME)

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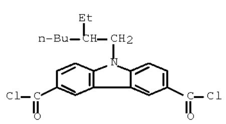
CRN 229626-80-6
CMF C22 H23 Cl2 N O2



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CRN 315324-12-2
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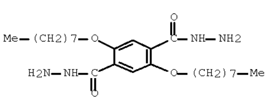
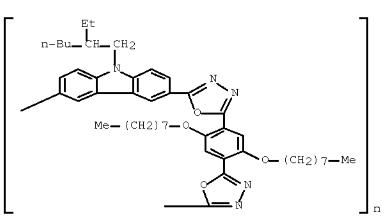


CAS Registry Number
244036-31-5 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,3,4-oxadiazole-2,5-diyl[2,5-bis(octyloxy)-1,4-phenylene]-1,3,4-oxadiazole-2,5-diyl] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

L38 ANSWER 118 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1999:377083 CAPLUS Full-text
Document Number
131:158056
Title
A Soluble Green-Light-Emitting Alternating Copolymer with Acceptor-Substituted Bicarbazyl Units
Author/Inventor
Boucard, V.; Ades, D.; Siove, A.; Romero, D.; Schaer, M.; Zuppiroli, L.
Patent Assignee/Corporate Source
Laboratory of Macromolecular Research (CNRS), Galilee Institute University of Paris-Nord, Villetaneuse, 93430, Fr.
Source
Macromolecules (1999), 32(14), 4729-4731 CODEN: MAMOBX; ISSN: 0024-9297
Document Type
Journal
Language
English
Abstract
Poly[bicarbazolylene-alt-phenylenebis(cyanovinylene)] (I) was prepared by Knoevenagel condensation between N,N'-dioctyl-3,3'-bicarbazyl-6,6'- dialdehyde and cyanoterephthalylidene. The electroluminescence feature of LEDs based on I as an emissive layer were described and compared with those of bicarbazyl taken as model compound. I showed an internal charge transfer between the electron-donor carbazole subunits and the electron-acceptor cyanovinylene moieties which allowed to shift the luminescence from blue to green.
Hit Structure

CAS Registry Number
193017-44-6 CAPLUS

Chemical or Trade Name
1,4-Benzenediacetonitrile, polymer with 9,9'-dioctyl[3,3'-bi-9H-carbazole]-6,6'-dicarboxaldehyde (9CI) (CA INDEX NAME)

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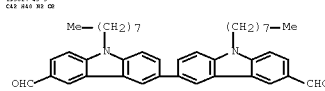
CRN 193017-43-5
CMF C42 H48 N2 O2



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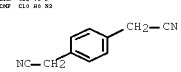
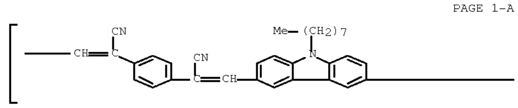
CRN 622-75-3
CMF C10 H8 N2



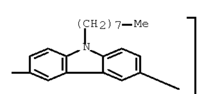
CAS Registry Number
193017-45-7 CAPLUS

Chemical or Trade Name
Poly[(9,9'-dioctyl[3,3'-bi-9H-carbazole]-6,6'-diyl)(2-cyano-1,2-ethenediyl)-1,4-phenylene(1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)

L38 ANSWER 119 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1999:346202 CAPLUS Full-text
Document Number
130:353054
Title
Organic electroluminescent polymer for light-emitting diode and devices therefrom
Author/Inventor
Jin, Sung-Ho; Kim, Woo-Hong; Son, Byung-Hee; Song, In-Sung; Han, Eun-Mi
Patent Assignee/Corporate Source
Samsung Display Devices Co. Ltd., S. Korea; Samsung General Chemicals Co. Ltd.
Source
Brit. UK Pat. Appl., 47 pp. CODEN: BAXXDU
Document Type
Patent
Language
English
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2328212	A	19990217	GB 1998-17150	19980806
GB 2328212	B	20001129		
JP 11124573	A	19990511	JP 1998-225851	19980810
JP 2974070	B2	19991108		
TW 412846	A	20000926	TW 1998-113101	19980812

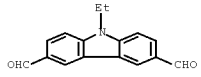
Abstract

A light-emitting polymer for an electroluminescent display comprises a polymer having a dialkylphenylene moiety and a carbazole moiety (, where R1-R3 are independently C2-12 aliphatic alkyl or C5-16 branched alkyl; p = 5-100; and/or a polymer having an oxadiazole moiety and a poly(p-phenylene-vinylene) moiety, and optionally a conventional polymer and a lower-mol. fluorescent dye. The polymer is applied to a light-emitting layer of a light-emitting diode having a cathode/light-emitting layer/anode structure, a cathode/buffer layer/light-emitting layer/anode structure, or a cathode/hole-transporting layer/light-emitting layer/electron-transporting layer/anode structure. Thus, a 2,5-bis(p-bromophenyl)-1,3,4-oxadiazole-1- methoxy-4-(2-ethylhexyloxy)-2,5-phenylboronic acid copolymer (monomer precurs. given) was prepared, which was soluble in an organic solvent and showed excellent electron transport properties.

Hit Structure

CAS Registry Number
70207-46-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-ethyl- (CA INDEX NAME)



CAS Registry Number
224558-12-7 CAPLUS

Chemical or Trade Name
Phosphonium, [(2,5-dihexyl-1,4-phenylene)bis(methylene)]bis[triphenyl-, dichloride, polymer with 9-ethyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

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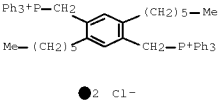
CRN 224558-07-0
CMF C54 H60 P2 . 2 Cl



2 Cl-

CM
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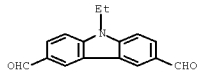
CRN 70207-46-4
CMF C16 H13 N O2



OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

L36 ANSWER 120 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1999:270668 CAPLUS Full-text
Document Number
130:359126
Title
Blue electroluminescence from novel silicon-based copolymers and their blend with enhanced luminescence efficiency
Author(s)
Kim, Hwan Kyu; Park, Dae-Soon; Kim, Ki-Dong; Song, Hyun Hoon
Patent Assignee/Corporate Source
Department Macromolecular Science, Hannam University, Taejon, 300791, S. Korea
Source
MCLC S&T, Section B: Nonlinear Optics (1999), 20(1-4), 297-316 CODEN: MCLOEB; ISSN: 1058-7268
Document Type
Journal
Language
English
Abstract

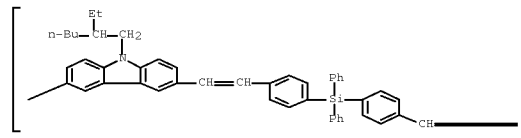
Novel poly(p-phenylenevinylene)-related Si-base copolymers show the UV-visible strong absorption bands around 347-387 nm. Their maximum photoluminescence (PL) wavelengths for SiPPV analogs appeared around 420-460 nm in the blue region. The PL intensity was improved by diluting the luminescent polymer with an inert matrix. The electroluminescence (EL) spectra of the Si-based copolymers showed the highest peak around 460 nm at the operating voltage of 9 V. The ionization potential of SiPhPPV measured by a low-energy photoelection emission analyzer was 6. 45 EV and the band gap of SiPhPPV was estimated to be 2.98 eV. The conductive band (CB or LUMO) of SiPhPPV was located 0.2 eV lower than the LUMO of poly(cyanoterephthalylidene). Therefore, the Si-based copolymer, with a relatively short π-conjugation length exhibited blue light- emitting diodes operating at low voltages, which can be ascribed to the reduction of the LUMO level in luminescent polymers.

Hit Structure

CAS Registry Number
109575-99-3 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene(diphenylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A

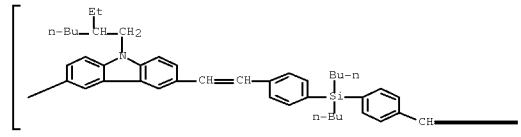


PAGE 1-B

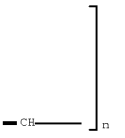
CAS Registry Number
109576-03-8 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene(dibutylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CAS Registry Number
201745-63-2 CAPLUS

Chemical or Trade Name
Phosphonium, [(dibutylsilylene)bis(4,1-phenylenemethylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

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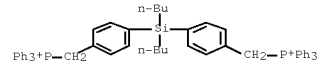
CRN 181640-92-0
CMF C58 H60 P2 Si . 2 Br



2 Br-

CM
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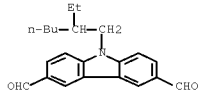
CRN 169051-20-1
CMF C22 H25 N O2



CAS Registry Number
201745-67-6 CAPLUS

Chemical or Trade Name
Phosphonium, [(diphenylsilylene)bis(4,1-phenylenemethylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

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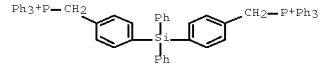
CRN 181640-96-4
CMF C63 H52 P2 Si . 2 Br



2 Br-

CM
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CRN 169051-20-1
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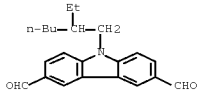
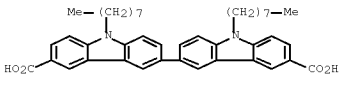


OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L38 ANSWER 121 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:237833 CAPLUS FullNet
Document Number
130:344495
Title
Organic light emitting diodes based on bicarbazyls
Author(Inventor
Santos, W. S.; Schaer, M.; Adès, D.; Siove, A.; Zuppiroli, L.
Patent Assignee/Corporate Source
Department of Physics, X3A, EPFL, Lausanne, CH-1015, Switz.
Source
Proceedings of SPIE-The International Society for Optical Engineering (1998), 3476(Organic Light-Emitting Materials and Devices II), 295-303 CODEN: PSISDG; ISSN: 0277-786X
Document Type
Journal
Language
English
Abstract
Bicarbazyls are stable and small organic mols. with external quantum yields of 0.1% in single layer devices. Devices from N,N'-diethyl-3,3'-bicarbazyl (EtCz)2 emit in the violet-blue spectral region (420 nm). Multilayer configurations with transport layers show a significant higher brightness and quantum efficiency. E-HOJ and addition of N,N'-dioctyl-3,3'-bicarbazyl-6,6'-dicarboxylic acid, (OctCz COOH)2, improves the device stability. The current voltage characteristics of (EtCz)2 is well described by the authors' recent microscopic model for space charge limited currents in an assembly of conjugated polymer segments. Although the applicability of the polaron concept to small mols. is somewhat questionable, the excellent results obtained with the model reveal the importance of mol. relaxation processes during the jump of the carrier.
Hit Structure

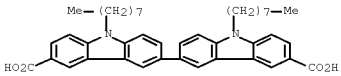
CAS Registry Number
220160-67-5 CAPLUS

Chemical or Trade Name
[3,3'-Bi-9H-carbazole]-6,6'-dicarboxylic acid, 9,9'-dioctyl- (CA INDEX NAME)



CAS Registry Number
220160-67-5 CAPLUS

Chemical or Trade Name
[3,3'-Bi-9H-carbazole]-6,6'-dicarboxylic acid, 9,9'-dioctyl- (CA INDEX NAME)



L38 ANSWER 122 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:237831 CAPLUS FullNet
Document Number
131:27200
Title
Linear, macrocyclic, and hyperbranched polymers for electroluminescent applications.
Author(Inventor
Tao, X. T.; Zhang, Y. D.; Maruyama, S.; Wada, T.; Sasabe, H.; Suzuki, H.; Watanabe, T.; Miyata, S.
Patent Assignee/Corporate Source
Biopolymer physics laboratory, The Institute of Physical and Chemical Research (RIKEN), Saitama, 351-01, Japan
Source
Proceedings of SPIE-The International Society for Optical Engineering (1998), 3476(Organic Light-Emitting Materials and Devices II), 278-286 CODEN: PSISDG; ISSN: 0277-786X
Document Type
Journal
Language
English
Abstract
The authors report polymers with linear (1-dimensional), macrocyclic (2-dimensional) and hyperbranched structures (3-dimensional) for electroluminescent (EL) applications. The polymers are polycarbazoles (PC) containing different substituents. The polymers are amorphous and are soluble in common organic solvents such as CHCl3 and THF. High optical quality films were obtained by spin-coating from the polymer solns. of CHCl3 or THF. All these polymers show strong luminescence under a UV-lamp illumination. Single and bilayer EL devices consisting of anode/hole transfer layer (HTL)/electron transfer layer (ETL)/cathode were fabricated and characterized. The effects of polymer structures on the energy levels and EL properties are discussed. Macrocyclic oligomers and hyperbranched polymers are new candidates for EL devices.
Hit Structure

CAS Registry Number
197351-93-5 CAPLUS

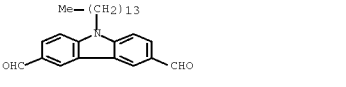
Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl-, homopolymer (CA INDEX NAME)

CM
1

CRN 188740-71-8
CMF C30 H37 N

CAS Registry Number
188740-71-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl- (CA INDEX NAME)



CAS Registry Number
197351-93-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl-, homopolymer (CA INDEX NAME)

CM
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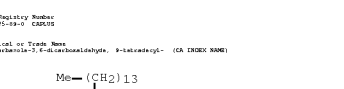
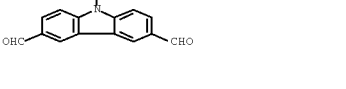
CRN 188740-71-8
CMF C30 H37 N



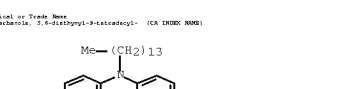
CAS Registry Number
188740-71-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl- (CA INDEX NAME)



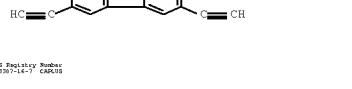
CAS Registry Number
313397-16-7 CAPLUS

Chemical or Trade Name
Acetic acid, cyano-, (9-tetradecyl-9H-carbazole-3,6-diyl)bis(methylene) ester (9CI) (CA INDEX NAME)



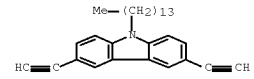
CAS Registry Number
227795-24-5 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dimethanol, 9-tetradecyl- (CA INDEX NAME)



OS.CITING REF COUNT: 54 THERE ARE 54 CAPLUS RECORDS THAT CITE THIS RECORD (55 CITINGS)

L38 ANSWER 124 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:141737 CAPLUS FullNet



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

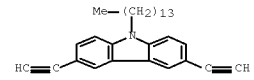
L38 ANSWER 123 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:204979 CAPLUS FullNet
Document Number
131:85576
Title
Electroluminescent applications of a cyclic carbazole oligomer
Author(Inventor
Maruyama, Sumio; Tao, Xu-tang; Hokari, Hirofumi; Noh, Taeyong; Zhang, Yadong; Wada, Tatsuo; Suzuki, Hiromi; Watanabe, Toshiyuki; Miyata, Seizo
Patent Assignee/Corporate Source
Laboratory for Biopolymer Physics, The Institute of Physical and Chemical Research (RIKEN), Wako, Saitama, 351-0198, Japan
Source
Journal of Materials Chemistry (1998), 8(4), 893-898 CODEN: JMACEP; ISSN: 0959-9428
Document Type
Journal
Language
English
Abstract
A cyclic carbazole oligomer for organic light-emitting diodes is described. This cyclic oligomer has a high glass transition temperature (105°), and high quality amorphous film can be prepared by the conventional spin-coating technique. The authors examined the characteristics of this cyclic oligomer for electron transport layer applications. The device structure of ITO/cyclic/hole transport layer/electron transport layer/Al was used. The EL device exhibited green light with a luminance of 60 cd m-2 at 15 V and the external quantum efficiency was 0.44%.
Hit Structure

CAS Registry Number
197351-93-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl-, homopolymer (CA INDEX NAME)

CM
1

CRN 188740-71-8
CMF C30 H37 N



CAS Registry Number
313397-16-7 CAPLUS

Chemical or Trade Name
Acetic acid, cyano-, (9-tetradecyl-9H-carbazole-3,6-diyl)bis(methylene) ester, polymer with 9-tetradecyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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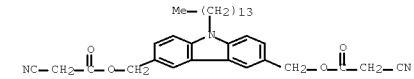
CRN 313397-16-7
CMF C34 H43 N3 O4



CM
2

CRN 103975-69-0
CMF C29 H37 N O2

CAS Registry Number
103975-69-0 CAPLUS

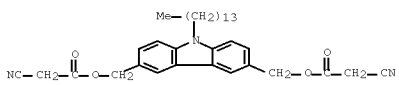
Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-tetradecyl- (CA INDEX NAME)

CAS Registry Number
188740-71-8 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl- (CA INDEX NAME)

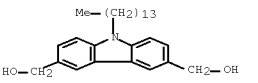
CAS Registry Number
313397-16-7 CAPLUS

Chemical or Trade Name
Acetic acid, cyano-, (9-tetradecyl-9H-carbazole-3,6-diyl)bis(methylene) ester (9CI) (CA INDEX NAME)



CAS Registry Number
227795-24-5 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dimethanol, 9-tetradecyl- (CA INDEX NAME)

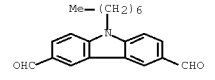


OS.CITING REF COUNT: 54 THERE ARE 54 CAPLUS RECORDS THAT CITE THIS RECORD (55 CITINGS)

Document Number
130:338617
Title
Synthesis and electroluminescent properties of heterocycle-containing poly(p-phenylene vinylene) derivatives.
Author(Inventor
Wang, Zhu; Hua, Wenling; Zhang, Fengling; Wang, Yongsheng
Patent Assignee/Corporate Source
Department of Chemistry, Peking University, Beijing, 100871, Peop. Rep. China
Source
Synthetic Metals (1999), 99(3), 249-252 CODEN: SYMEDZ; ISSN: 0379-6779
Document Type
Journal
Language
English
Abstract
Two novel conjugated polymers were synthesized by the Wittig reaction. The multilayer light emitting diodes were fabricated and showed green to blue electro-luminescence.
Hit Structure

CAS Registry Number
173483-07-3 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-hexyl- (CA INDEX NAME)

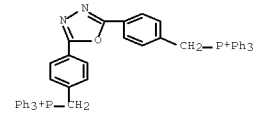


CAS Registry Number
324183-10-2 CAPLUS

Chemical or Trade Name
Phosphonium, [1,3,4-oxadiazole-2,5-diylbis(4,1-phenyleneoxymethylene)]bis[triphenyl-, dibromide, polymer with 9-hexyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

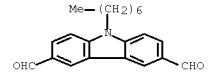
CM
1

CRN 321615-56-1
CMF C52 H42 N2 O P2 . 2 Br



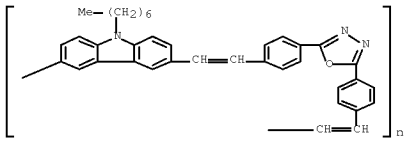
CM
2

CRN 173483-07-3
CMF C21 H23 N O2



CAS Registry Number
324183-15-7 CAPLUS

Chemical or Trade Name
Poly[(9-hexyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene-1,2,4-oxadiazole-2,5-diyl-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 22 THERE ARE 22 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)

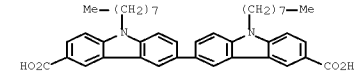
L38 ANSWER 125 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1999:115901 CAPLUS Full text
Document Number
130:182052
Title
Electroluminescent device
Author(s)/Inventor
Nanich, Frank-Alain; Potzinger, Francois; Si-Ahmed, Lynda; Zuppiroli, Libero
Patent Assignee/Corporate Source
Ecole Polytechnique Federale de Lausanne, Switz.
Source
PCT Int. Appl., 57 pp. CODEN: PIXD2
Document Type
Patent
Language
French
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9907026	A1	19990211	WO 1998-CH324	19980731
EP 1012892	A1	20000628	EP 1998-934729	19980731
JP 2001512145 T		20010821	JP 2000-505659	19980731
US 6565544	B1	20030527	US 2000-463880	20000131

Abstract
The invention concerns a electroluminescent device with a multilayer structure comprising: (i) a 1st electrode including a layer, consisting of a transparent or translucent conductive material selected among metal oxides and metal nitrides, said layer being deposited on a transparent support, consisting of a glass, Si, alumina plate, or a polymer sheet; (ii) a 2nd electrode; (iii) a layer, arranged between the 2 electrodes, comprising a semiconductor and electroluminescent solid organic substance, said layer being optionally bordered with 1 or several intermediate layers, consisting of electrocatalysts; and (iv) a layer with monomol. structure, arranged between the layer consisting of the conductive material and the layer consisting of the electroluminescent substance. Said device is further characterized in that said layer consists of a dipolar organic compound wherein the structure has an electronic system e., a functional group, vicinal or not of the electronic system e. Also, the dipolar organic compound is chemical bound by the functional group to the conductive material and has chemical affinity for the organic electroluminescent substance.
Hit Structure

CAS Registry Number
201160-47-0 CAPLUS

Chemical or Trade Name
[2,3'-Bi-9H-carbazole]-6,6'-dicarboxylic acid, 9,9'-dioctyl- (CA INDEX NAME)

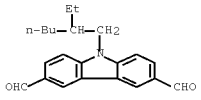


OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

L38 ANSWER 126 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1999:12372 CAPLUS Full text
Document Number
130:252741
Title
Highly Efficient Light-Emitting Polymers Composed of Both Hole and Electron Affinity Units in the Conjugated Main Chain
Author(s)/Inventor
Song, Seung-Yong; Jang, Min Sik; Shim, Hong-Ku; Hwang, Do-Hoon; Zyung, Taehyoung
Patent Assignee/Corporate Source
Department of Chemistry, Korea Advanced Institute of Science and Technology, Taejon, 305-701, S. Korea
Source
Macromolecules (1998), 32(1), 1482-1487 CODEN: MAMOBX; ISSN: 0024-9297
Document Type
Journal
Language
English
Abstract
Two fully conjugated alternating copolymers containing both carbazole and oxadiazole units were prepared through the Wittig condensation polymerization of carbazole units linked with oxadiazole units via meta and para positions. The polymers with the para linkage (PPOX-CAR) and the meta linkage (PMOX-CAR) in the main chain were soluble in common organic solvents and thermally stable on heating (the weight loss was less than 5% on heating to about 400° under nitrogen atmosphere). The maximum photoluminescence and the electroluminescence wavelengths of PPOX-CAR and PMOX-CAR were varied from 495 nm in the greenish-blue emission region to 450 nm in the blue emission region depending on the kink structure. The turn-on voltage of PPOX-CAR and PMOX-CAR was 7.5 and 10.5 V, resp., for single-layer light-emitting diodes of AlPPOX-CAR or PMOX-CAR/ITO glass. The maximum brightness of the AlPPOX-CAR/ITO single-layer device was 300 cd/m2 at 20 V.
Hit Structure

CAS Registry Number
169051-80-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)



CAS Registry Number
221615-56-4 CAPLUS

Chemical or Trade Name
Phosphonium, [1,1'-[1,3,4-oxadiazole-2,5-diylbis(4,1-phenyleneethynylene)]bis[1,1,1-triphenyl-, bromide (1:2), polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (CA INDEX NAME)

CM
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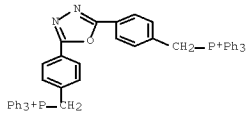
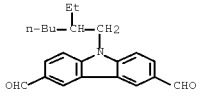
CRN 221615-56-1
CMF C52 H42 N2 O P2 . 2 Br



●2 Br⁻

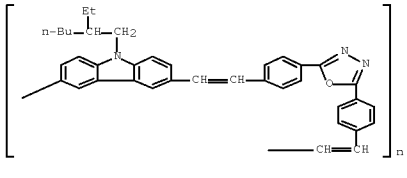
CM
2

CRN 169051-80-1
CMF C29 H35 N O2



CAS Registry Number
221615-60-7 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene-1,3,4-oxadiazole-2,5-diyl-1,4-phenylene-1,2-ethenediyl] (CA INDEX NAME)



CAS Registry Number
221615-62-9 CAPLUS

Chemical or Trade Name
Phosphonium, [1,3,4-oxadiazole-2,5-diylbis(3,1-phenyleneethynylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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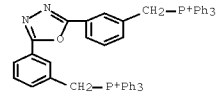
CRN 221615-58-3
CMF C52 H42 N2 O P2 . 2 Br



●2 Br⁻

CM
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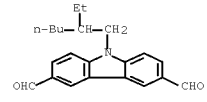
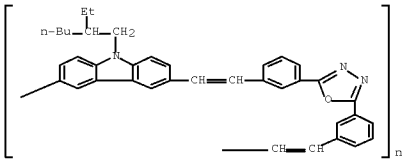
CRN 169051-80-1
CMF C29 H35 N O2



CAS Registry Number
221615-64-1 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,3-phenylene-1,3,4-oxadiazole-2,5-diyl-1,3-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)



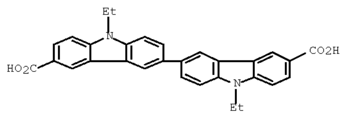
OS.CITING REF COUNT: 99 THERE ARE 99 CAPLUS RECORDS THAT CITE THIS RECORD (103 CITINGS)

L38 ANSWER 127 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:696294 CAPLUS Full text
Document Number
130:58597
Title
Blue organic light emitting diodes based on bicarbazyle derivates: Device stability and multilayer configuration
Author(s)/Inventor
Bacsa, W. S.; Schaer, M.; Zuppiroli, L.; Ades, D.; Siove, A.
Patent Assignee/Corporate Source
Department of Physics, EPFL, KSA, Lausanne, CH-1015, Switz.
Source
Journal of Applied Physics (1998), 84(10), 5733-5738 CODEN: JAPIAU; ISSN: 0021-8979

Document Type
Journal
Language
English
Abstract
The device stabilities of blue light emitting diodes based on N,N'-diethyl-3,3'-bicarbazyle, (EtCz)2, were substantially improved by coevaporation with N,N'-diethyl-3,3'-bicarbazyle-6,6' dicarbaboxylic acid, (OcCzCOOH)2. We attribute this effect to the formation of a network of hydrogen bonds in the alloy related to the presence of carboxyl groups. A three layer device with transport layers for both electrons and holes improves the quantum efficiency: with an Al cathode we obtain a luminance of 100 cd/m2 at c.d. levels of 50 mA/cm2. We find that the current-voltage characteristics of (EtCz)2 are well described by our recent microscopic model for space charge limited currents in an assembly of conjugated polymer segments. The incorporation of an electron transport layer splits and shifts the electroluminescent band to lower energies and we observe a significant addnl. downshift after a period of three weeks which we attributed to mol. diffusion at the interface between the emitting and electron transport layers.
Hit Structure

CAS Registry Number
57102-88-2 CAPLUS

Chemical or Trade Name
[3,3'-Bi-9H-carbazole]-6,6'-dicarboxylic acid, 9,9'-diethyl- (CA INDEX NAME)



OS.CITING REF COUNT: 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

L38 ANSWER 128 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:651124 CAPLUS Full-text
Document Number
129:308409
Title
Positive-hole injection material for organic electroluminescent device
Author/Inventor
Enokida, Toshio; Onikubo, Shunichi; Tamano, Michiko; Okutsu, Satoshi
Patent Assignee/Corporate Source
Toyo Ink Mfg. Co., Ltd., Japan
Source
Jpn. Kokai Tokkyo Koho, 43 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

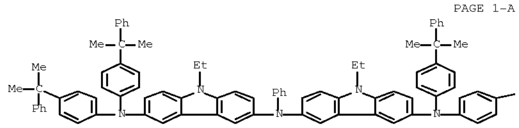
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10265773	A	19981006	JP 1997-69911	19970324

Abstract
The material has a formula I [R1-20 = H, halo, alkyl, alkoxy, thioalkoxy, amino, monocyclic group, polycyclic group, Q; R21-25 = H, halo, alkyl, alkoxy, thioalkoxy, amino, monocyclic group, polycyclic group; R21-25 may form a cycloalkyl ring, aryl ring; X1 = direct bond, alkylene, (CR26R27)xO(CR28R29)y, (CR30R31)xS(CR32R33)y, O, S, CO, SO2, SiR34(R35), NR36, PR37, PO(R38); x, y = 0-8 integer; x = y ≠ 0; Z1 = Ar1, Ar2NR39Ar3, Ar4NR40Ar5NR41Ar6; Ar1-6 = arylene; R26-41 = alkyl, monocyclic group, polycyclic group]. The device shows high luminance, efficiency, long life, and storage stability.
Hit Structure

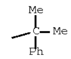
CAS Registry Number
214338-72-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3-[6-[bis[4-(1-methyl-1-phenylethyl)phenyl]amino]-9-ethyl-9H-carbazol-3-yl]-9-ethyl-N6,N6-bis[4-(1-methyl-1-phenylethyl)phenyl]-N3-phenyl- (CA INDEX NAME)

PAGE 1-A



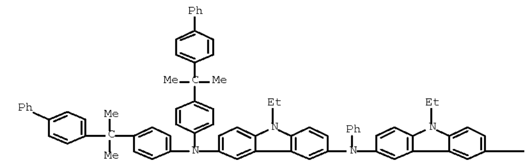
PAGE 1-B



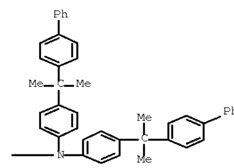
CAS Registry Number
214338-73-5 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3,N3-bis[4-(1-[1,1'-biphenyl]-4-yl-1-methylethyl)phenyl]-N6-[6-[bis[4-(1-[1,1'-biphenyl]-4-yl-1-methylethyl)phenyl]amino]-9-ethyl-9H-carbazol-3-yl]-9-ethyl-N6-phenyl-
(CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L38 ANSWER 129 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:614437 CAPLUS Full-text
Document Number
129:295965
Title
Organic electroluminescent device with high luminance and polycyclic phosphorescent compound therefor
Author/Inventor
Onikubo, Shunichi; Tamano, Michiko; Okutsu, Satoshi; Enokida, Toshio
Patent Assignee/Corporate Source
Toyo Ink Mfg. Co., Ltd., Japan
Source
Jpn. Kokai Tokkyo Koho, 59 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

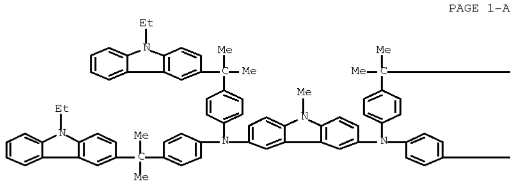
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10251633	A	19980922	JP 1997-62560	19970317
JP 3503403	B2	20040308		
EP 866110	A1	19980923	EP 1998-301986	19980317
EP 866110	B1	20041020		
EP 934992	A1	19990811	EP 1999-106698	19980317
EP 934992	B1	20040721		
US 6280859	B1	20010828	US 1998-42569	19980317
US 20010033944	A1	20011025		

Abstract
The claimed compound is I [A = aromatic (condensed) ring, (condensed) heterocycle excluding Q1 (E = H or linkage), bivalent group comprising ≥2 kinds of 2-10 above ring systems which are connected directly or via O, N, S, C1-20 chain, nonarom. cycle, where the case of A = Q3 is excluded; Ar1-4 = (condensed) aromatic group; X1-4 = O, S, CO, SO2, CxH2xOCyH2y (x, y = 0-20; x + y ≠ 0), C2-20 alkyl(id)ene, bivalent alicyclic group; R1-20 = H, halo, alkyl (oxy), aromatic ring, aromatic heterocycle, amino]. Also claimed is an organic electroluminescent device containing I with high luminance and good stability in repeated uses.
Hit Structure

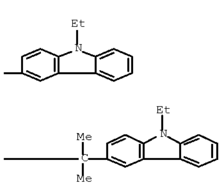
CAS Registry Number
213968-54-8 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, N3,N3,N6,N6-tetrakis[4-[1-(9-ethyl-9H-carbazol-3-yl)-1-methylethyl]phenyl]-9-methyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 34 THERE ARE 34 CAPLUS RECORDS THAT CITE THIS RECORD (55 CITINGS)

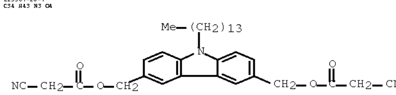
L38 ANSWER 130 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:544553 CAPLUS Full-text
Document Number
129:267623
Title
A cyclic carbazole oligomer for electroluminescence applications
Author/Inventor
Maruyama, Sumio; Tao, Xu-Tang; Hokari, Hirofumi; Noh, Taeyong; Zhang, Yadong; Wada, Tatsuo; Sasabe, Hiroyuki; Suzuki, Hironori; Watanabe, Toshiyuki; Miyata, Seizo
Patent Assignee/Corporate Source
The Institute of Physical and Chemical Research (RIKEN), Saitama, 351-0198, Japan
Source
Chemistry Letters (1998), (8), 749-750 CODEN: CMLTAG; ISSN: 0366-7022
Document Type
Journal
Language
English
Abstract
A novel cyclic carbazole oligomer, which contains the EL chromophore in the main-chain, for organic light-emitting diodes is described. The device structure of glass substrate/In Sn oxide/hole transport layer/cyclic oligomer (electron transport layer)/Al was employed. The EL device exhibited green light with a luminance of 60 cd/m2 at 15 V.
Hit Structure

CAS Registry Number
213387-17-8 CAPLUS

Chemical or Trade Name
Acetic acid, cyano-, (9-tetradecyl-9H-carbazole-3,6-diyl)bis(methylene) ester, polymer with 9-tetradecyl-9H-carbazole-3,6-dicarboxaldehyde (9CI)
(CA INDEX NAME)

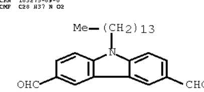
CM
1

CRN 213387-16-7
CMF C34 H43 N3 O4



CM
2

CRN 183275-89-0
CMF C28 H37 N O2



OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

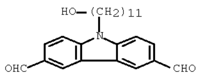
L38 ANSWER 131 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:531968 CAPLUS Full-text
Document Number
129:260970
Title
Multifunctional hyperbranched carbazole polymers
Author/Inventor
Wada, Tatsuo; Zhang, Yadong; Tao, Xu-Tang; Sasabe, Hiroyuki
Patent Assignee/Corporate Source
Frontier Res. Program, Inst. Phys. & Chem. Res. (RIKEN), Wako, Saitama, 351-0198, Japan
Source
Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1998), 39(2), 985-986 CODEN: ACPPAY; ISSN: 0032-3934
Document Type
Journal
Language
English
Abstract
A hyperbranched carbazole polymer was prepared from 3,6-diformyl-9-(11-hydroxyundecyl)carbazole and Me cyanoacetate. The polymer had second harmonic coefficient 7 pm/V3 and exhibited electroluminescent properties.
Hit Structure

CAS Registry Number
174202-82-5 CAPLUS

Chemical or Trade Name
Acetic acid, cyano-, methyl ester, polymer with 9-(11-hydroxyundecyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

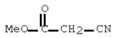
CM
1

CRN 174202-80-3
CMF C25 H31 N O3



CM
2

CRN 105-34-0
CMF C4 H5 N O2



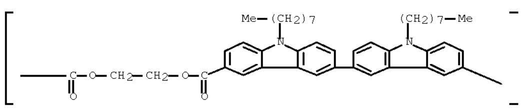
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

L38 ANSWER 132 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:440184 CAPLUS Full-text
Document Number
129:122919
Title
Polyesters from bicarbazyl in a chain and model compound: synthesis, electrochemical and electroluminescence properties
Author/Inventor
Benazzi, T.; Ades, D.; Siove, A.; Romero, D.; Nuesch, F.; Zuppiroli, L.
Patent Assignee/Corporate Source
Laboratoire de Recherches sur les Macromolecules, Institut Galilee, CNRS, Universite Paris-Nord, Villetaneuse, 93430, Fr.
Source
Journal de Chimie Physique et de Physico-Chimie Biologique (1998), 95(6), 1238-1241 CODEN: JCPBAN; ISSN: 0021-7689
Document Type
Journal
Language
French
Abstract
Polyesters with bicarbazyl groups in the main chain were synthesized by a two-step polycondensation in bulk from 9,9'-dioctyl-[3,3'-bi-9H-carbazole]-6,6'-dicarbonyl chloride and ethylene glycol. Electrochem. and electroluminescence properties of the polyesters were studied and compared with those of model compds. of the repetitive unit. Electrochem. studies showed that the materials are electroactive and allowed the determination of the optimal stability conditions. From the photo- and electroluminescence studies of both the polyesters and the model compds., a classification of the performances of the corresponding diodes was established. The best results were obtained with bicarbazyl (blue-light).
Hit Structure

CAS Registry Number
210344-74-4 CAPLUS

Chemical or Trade Name
Poly[(9,9'-dioctyl[3,3'-bi-9H-carbazole]-6,6'-diyl)carbonyloxy-1,2-ethanediyloxycarbonyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD
(9 CITINGS)

L38 ANSWER 133 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:423987 CAPLUS Full-text
Document Number
129:149397
Title
Polymeric color developers for electroluminescent diodes and method for their synthesis
Author/Inventor
Park, Jong Wook
Patent Assignee/Corporate Source
Samsung Electron Devices Co., Ltd., S. Korea
Source
Jpn. Kokai Tokkyo Koho, 5 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10176061	A	19980630	JP 1997-267567	19971001
JP 3880152	B2	20070214		
IN 1997DE02252	A	20110610	IN 1997-DE2252	19970812
CN 1183454	A	19980603	CN 1997-120086	19971006
CN 1115374	C	20030723		
US 6015631	A	20000118	US 1997-944320	19971006

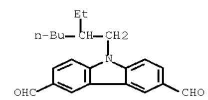
Abstract
The color developers are polymers bearing electron-donating and electron-receiving groups along polymer backbones, e.g., poly(3,6-N-alkylcarbazolylcyanoterephthalidene) (I), which can be synthesized by the reaction of N-alkylcarbazole with P oxyhalide/DMF/dihaloethane, polymerizing the resulting N-alkyl-3,6-diformylcarbazole with 1,4-phenylenediacetonitrile in solution, followed by precipitating the I with alc. and its isolation. Thus, heating carbazole with K carbonate, DMF and 2-ethylhexyl bromide at reflux for 1-2 days, adding water and liquid-liquid extracting gave N-ethylhexylcarbazole which was heated with P oxyhalide/DMF/dichloroethane mixture at 90-100° for 1-2 days to give N-ethylhexyl-3,6-diformylcarbazole (II). The reaction of II with 1,4-phenylenediacetonitrile gave a copolymer.
Hit Structure

CAS Registry Number
169051-21-2 CAPLUS

Chemical or Trade Name
1,4-Benzenediacetonitrile, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

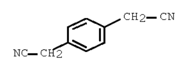
CM
1

CRN 169051-20-1
CMF C22 H25 N O2



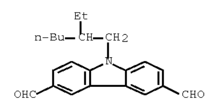
CM
2

CRN 622-75-3
CMF C10 H8 N2



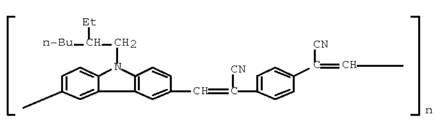
CAS Registry Number
169051-20-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)



CAS Registry Number
192446-73-4 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)-1,4-phenylene(1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)

L38 ANSWER 134 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:336330 CAPLUS Full-text
Document Number
129:46952
Title
Metal complex polymers for electroluminescent applications
Author/Inventor
Tao, X. T.; Suzuki, H.; Zhang, Y. D.; Watanabe, T.; Miyata, S.; Wada, T.; Sasabe, H.
Patent Assignee/Corporate Source
Graduate School of Bio-Applications and Systems, Tokyo University of Agriculture and Technology, Koganei-shi, Tokyo, 184, Japan
Source
Materials Research Society Symposium Proceedings (1998), 488(Electrical, Optical, and Magnetic Properties of Organic Solid-State Materials IV), 503-508 CODEN: MRSPDH; ISSN: 0272-9172
Document Type
Journal
Language
English
Abstract
The authors report the synthesis and characterization of a soluble metal complex polymer for electroluminescent (EL) applications. The polymer was prepared by the reaction of a Zn Schiff base with 4,4'-diphenylmethane-diisocyanate. The polymer is amorphous and with glass transition temperature of 156° and is soluble in common organic solvents such as CHCl3, THF, and N-methylpyrrolidinone (NMP). High optical quality films were obtained by spin-coating the polymer solution of THF. The Zn Schiff base, and the polyurethane (PU) shows strong photoluminescence under a UV-lamp illumination. Single and double layer EL devices consisting ITO/hole transfer layer (HTL)/PU/Al were fabricated and characterized. The complex polymer could act as both electron transport and emissive layers for EL devices.
Hit Structure

CAS Registry Number
208389-59-7 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-di-1,3-butadiynyl-9-tetradecyl-, homopolymer (9CI) (CA INDEX NAME)

CM
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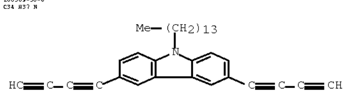
CRN 208389-58-6
CMF C34 H37 N



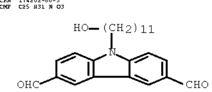
L38 ANSWER 135 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:116629 CAPLUS Full-text
Document Number
128:146919
Title
Hyperbranched polymers for electroluminescence applications
Author/Inventor
Tao, Xu Tang; Zhang, Ya Dong; Wada, Tatuso; Sasabe, Hiroyuki; Suzuki, Hironori; Watanabe, Toshiyuki; Miyata, Seizo
Patent Assignee/Corporate Source
Biopolymer Physics Laboratory, Institute Physical Chemical Research, Wako, 351, Japan
Source
Advanced Materials (Weinheim, Germany) (1998), 10(3), 226-230 CODEN: ADVMEW; ISSN: 0935-9648
Document Type
Journal
Language
English
Abstract
Results on using hyperbranched polycarbazole (HBPC) as an electron-transfer layer (ETL) and a main-chain polymer of poly(9-tetradecanyl-3,6-(dibutadiynyl)carbazole) (PTD-BC) as a hole-transfer layer (HTL) for double-layer LEDs are described. The determined ionization potentials for HBPC (5.9 eV) and PTD-BC (5.4 eV) and the electron affinities of 3.4 and 2.4 showed that the substances can be used as ETL and HTL. High-quality films were prepared by spin coating. LEDs were successfully fabricated using the novel emitter material.
Hit Structure

CAS Registry Number
176049-29-9 CAPLUS

Chemical or Trade Name
Acetic acid, cyano-, polymer with 9-(11-hydroxyundecyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

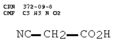
CM
1

CRN 174202-80-3
CMF C25 H31 N O3



CM
2

CRN 372-09-8
CMF C3 H3 N O2

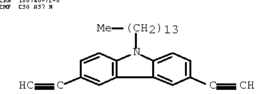


CAS Registry Number
197311-92-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl-, homopolymer (CA INDEX NAME)

CM
1

CRN 188740-71-8
CMF C30 H37 N



OS.CITING REF COUNT: 152 THERE ARE 152 CAPLUS RECORDS THAT CITE THIS RECORD (152 CITINGS)

L38 ANSWER 136 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:108434 CAPLUS Full-text
Document Number
128:141214
Title
Fluorene-based alternating copolymers and electroluminescence elements incorporating them
Author/Inventor
Kim, Chung Yup; Cho, Hyun Nam; Kim, Dong Young; Kim, Young Chul; Lee, Jun Young; Kim, Jai Kyeong
Patent Assignee/Corporate Source
Korea Institute of Science and Technology, S. Korea
Source
Brit. UK Pat. Appl., 86 pp. CODEN: BAXXDU
Document Type
Patent
Language
English
Patent Information

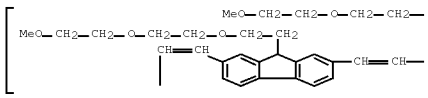
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2313127	A	19971119	GB 1996-24032	19961119
GB 2313127	B	19981014		
KR 176331	B1	19990401	KR 1996-16449	19960516
US 5807974	A	19980915	US 1996-756036	19961126
JP 10036487	A	19980210	JP 1997-69479	19970324
JP 3121282	B2	20001225		

Abstract
Fluorene-based alternating copolymers I [R, R1 = H, alkyl, cycloalkyl, aryl, alkoxy, cycloalkoxy, aryloxy; X = H, CN; Z = (un)substituted alkylene or arylene] can be used as light-emitting materials of electroluminescent elements. The electroluminescent elements have an anode/luminescent layer/cathode structure, in which the I is used as light- emitting material in the luminescent layer, or may have a transport and/or reflection layer added thereto. Thus, 9-hexylfluorene was bromomethylated and converted to the bisphosphonium salt by treatment with Ph3P. The bisphosphonium salt was copolymd. with N-[2-[2-(2-methoxyethoxy)ethoxy]ethyl]-3,6-carbazoledicarboxaldehyde to give a I with weight-average mol. weight 5900 and polydispersity 1.87, which showed absorption λmax 408 nm and emission λmax 470 nm.
Hit Structure

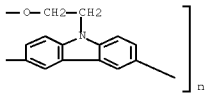
CAS Registry Number
202129-81-5 CAPLUS

Chemical or Trade Name
Poly[[9-[2-[2-(2-methoxyethoxy)ethoxy]ethyl]-9H-carbazole-3,6-diyl]-1,2-ethenediyl[9-[2-[2-(2-methoxyethoxy)ethoxy]ethyl]-9H-fluorene-2,7-diyl]-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

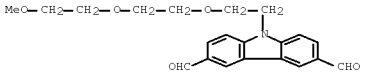


CAS Registry Number
302130-08-7 CAPLUS

Chemical or Trade Name
Phosphonium, [[9-[3-[3-[2-methoxyethoxy]ethoxy]ethyl]-9H-fluorene-2,7-diyl]bis(methylene)]bis[triphenyl-, dibromide, polymer with 9-[3-[3-[2-methoxyethoxy]ethoxy]ethyl]-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

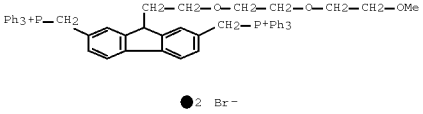
CM
1

CRN 302130-05-6
CMF C21 H23 N O5



CM
2

CRN 302130-02-7
CMF C50 H54 O3 P2 . 2 Br

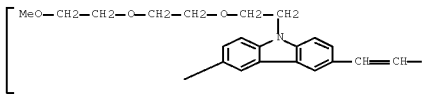


● 2 Br⁻

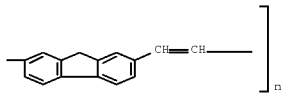
CAS Registry Number
302129-76-0 CAPLUS

Chemical or Trade Name
Poly[[9-[3-[3-[2-methoxyethoxy]ethoxy]ethyl]-9H-carbazole-3,6-diyl]-1,2-ethanediyl]-9H-fluorene-2,7-diyl-1,2-ethanediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



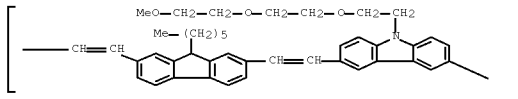
PAGE 1-B



CAS Registry Number
302129-79-1 CAPLUS

Chemical or Trade Name
Poly[[9-[3-[2-[2-methoxyethoxy]ethoxy]ethyl]-9H-carbazole-3,6-diyl]-1,2-ethanediyl[9-hexyl-9H-fluorene-2,7-diyl]-1,2-ethanediyl] (9CI) (CA INDEX NAME)

PAGE 1-A

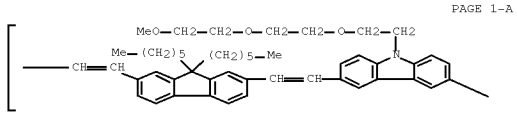


PAGE 1-B

CAS Registry Number
302129-80-4 CAPLUS

Chemical or Trade Name
Poly[[9-[3-[2-methoxyethoxy]ethoxy]ethyl]-9H-carbazole-3,6-diyl]-1,2-ethanediyl[9,9-dihexyl-9H-fluorene-2,7-diyl]-1,2-ethanediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



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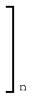
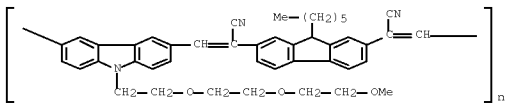


CAS Registry Number
302129-82-6 CAPLUS

Chemical or Trade Name
Poly[[9-[3-[3-[2-methoxyethoxy]ethoxy]ethyl]-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)[9-hexyl-9H-fluorene-2,7-diyl](1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)



CAS Registry Number
302130-05-0 CAPLUS

Chemical or Trade Name
Phosphonium, [9H-fluorene-2,7-diylbis(methylene)]bis[triphenyl-, dibromide, polymer with 9-[2-[2-(2-methoxyethoxy]ethoxy]ethyl]-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

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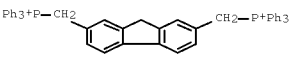
CRN 302130-04-9
CMF C51 H42 P2 . 2 Br



● 2 Br⁻

CM
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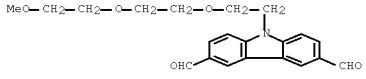
CRN 302130-03-8
CMF C21 H23 N O5



CAS Registry Number
302130-06-1 CAPLUS

Chemical or Trade Name
Phosphonium, [[9-hexyl-9H-fluorene-2,7-diyl]bis(methylene)]bis[triphenyl-, dibromide, polymer with 9-[3-[3-[3-methoxyethoxy]ethoxy]ethyl]-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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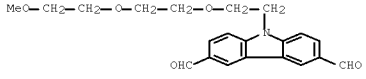
CRN 302130-03-8
CMF C21 H23 N O5



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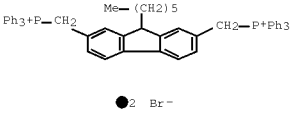
CRN 189369-07-9
CMF C57 H54 P2 . 2 Br



● 2 Br⁻

CAS Registry Number
302130-07-2 CAPLUS

Chemical or Trade Name
Phosphonium, [[9,9-dihexyl-9H-fluorene-2,7-diyl]bis(methylene)]bis[triphenyl-, dibromide, polymer with 9-[2-[2-[2-methoxyethoxy]ethoxy]ethyl]-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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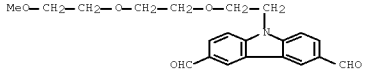
CRN 302130-03-8
CMF C21 H23 N O5



CM
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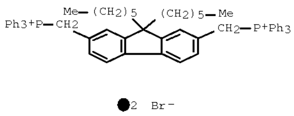
CRN 167140-76-1
CMF C63 H66 P2 . 2 Br

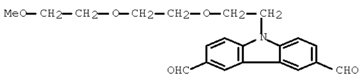


CAS Registry Number
202130-09-4 CAPLUS

Chemical or Trade Name
9H-Fluorene-2,7-diacetonitrile, 9-hexyl-, polymer with 9-[2-[2-(2-methoxyethoxy)ethoxy]ethyl]-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

CRN 202130-03-8
CMF C21 H23 N O5



CM
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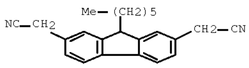
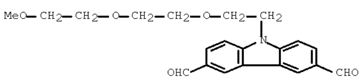
CRN 202129-99-5
CMF C23 H24 N2



CAS Registry Number
202130-03-8 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-[2-[2-(2-methoxyethoxy)ethoxy]ethyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (28 CITINGS)

L38 ANSWER 137 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
1998:89801 CAPLUS Full-text

Document Number
128:141270

Title
Tunable electroluminescence from silicon-containing poly(p-phenylenevinylene)-related copolymers with well-defined structures

Author/Inventor
Kim, Hwan Kyu; Ryu, Mi-Kyung; Kim, Ki-Dong; Lee, Soo-Min; Cho, Seong-Woo; Park, Jong-Wook

Patent Assignee/Corporate Source
Department of Macromolecular Science and Department of Chemistry, Hannam University, Taejon, 300-791, S. Korea

Source
Macromolecules (1998), 31(4), 1114-1123 CODEN: MAMOBX; ISSN: 0024-9297

Document Type
Journal

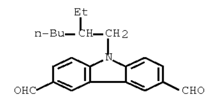
Language
English

Abstract
A new class of silicon-containing poly(p-phenylenevinylene)-related copolymers with a uniform π-conjugated segment regulated by organosilicon units was synthesized by the well-known Wittig reaction between the appropriate diphosphonium salts and the dialdehyde monomer such as terephthaldicarboxaldehyde, 2,5-thiophenedicarboxaldehyde, and N-(2-ethylhexyl)-3,6-diformylcarbazole. The resulting polymers were highly soluble in common organic solvents. They could spin cast onto various substrates to give highly transparent homogeneous thin films without heat treatment. Their glass transition temps. were in the range of 104-119°. The UV-visible absorbance of the present polymers shows strong absorption bands at around 347-387 nm, which corresponds to the π-π* transition of the conjugated segments. Their maximum photoluminescence wavelengths for SiPPV analogs appeared around 420-480 nm in the blue emission region, except a silicon-containing poly(p-phenylenevinylene)-related copolymer having a thiophene unit showed a strong PL peak at 520 nm in the green emission region. In the case of the polymers containing a carbazole unit, their PL spectra show both the highest peak in the PL emissive band at 450 nm and an addnl. strong emissive band in the green region. The single-layer light-emitting diode of a Al/SiPhPPV or SiPhPVK/ITO glass is fabricated. The threshold voltage is in the range 6-12 V from the I-V curve. The electroluminescence (EL) spectrum of the SiPhPPV gives the highest peak in the EL emissive band at 450 nm, when the operating voltage of 9 V was applied. For the polymer containing a carbazole unit, the EL spectrum of the polymer shows the highest peak in the EL emissive band at 450 nm as well as an addnl. strong emissive band in the yellow region, when the operating voltage of 10 V was applied. Interestingly, the SiPhPVK gives a strong white emitting light, when the operating voltage of higher than 12 V was applied.

Hit Structure

CAS Registry Number
169051-20-1 CAPLUS

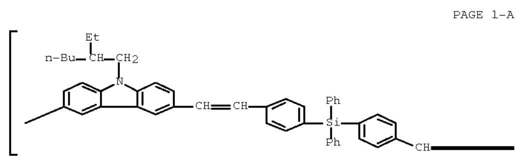
Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)



CAS Registry Number
189575-99-3 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(diphenylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A

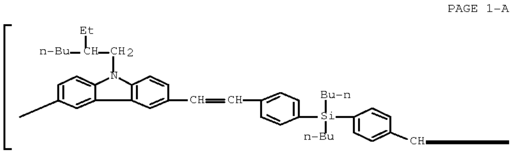


PAGE 1-B

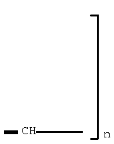
CAS Registry Number
189576-03-2 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(dibutylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CAS Registry Number
201745-62-2 CAPLUS

Chemical or Trade Name
Phosphonium, [(dibutylsilylene)bis(4,1-phenylenemethylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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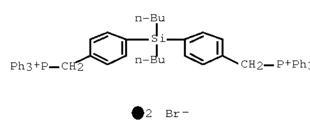
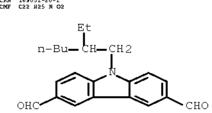
CRN 181648-92-0
CMF C58 H60 P2 Si . 2 Br



CM
2

CRN 169051-20-1
CMF C22 H25 N O2

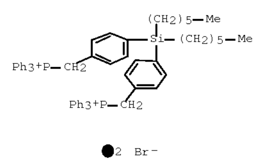


CAS Registry Number
201745-63-3 CAPLUS

Chemical or Trade Name
Phosphonium, [(dihexylsilylene)bis(4,1-phenylenemethylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

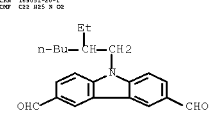
CM
1

CRN 201745-46-2
CMF C62 H68 P2 Si . 2 Br



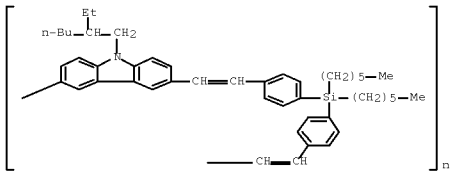
CM
2

CRN 169051-20-1
CMF C22 H25 N O2



CAS Registry Number
201745-65-5 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl]-1,2-ethenediyl-1,4-phenylene(dihexylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

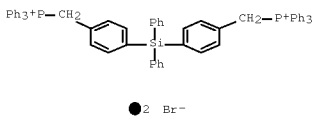


CAS Registry Number
201745-67-7 CAPLUS

Chemical or Trade Name
Phosphonium, [(diphenylsilylene)bis(4,1-phenyleneethynylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

CRN 101640-95-2
CMF C62 H50 P2 Si . 2 Br



CM
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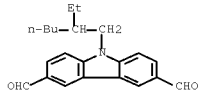
CRN 169051-20-1
CMF C23 H25 N O2



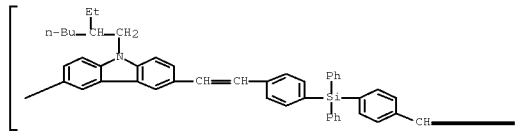
OS.CITING REF COUNT: 134 THERE ARE 134 CAPLUS RECORDS THAT CITE THIS RECORD (139 CITINGS)

L38 ANSWER 138 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:57734 CAPLUS Full-text
Document Number
128:210278
Title
Novel silicon-containing poly(p-phenylenevinylene)-related polymers for blue light-emitting diodes
Author(s)/Inventor
Kim, Hwan-Kyu; Ryu, Mi-Kyung; Kim, Ki-Dong; Lee, Ji-Hoon; Park, Jong-Wook; Cho, Seong-Woo
Patent Assignee/Corporate Source
Department of Macromolecular Science, Hanyang University, Taejon, 300-791, S. Korea
Source
Synthetic Metals (1997), 91(1-3), 207-209 CODEN: SYMEDZ; ISSN: 0379-6779
Document Type
Journal
Language
English
Abstract
A new class of silicon-containing poly(p-phenylenevinylene)-related polymers with a uniform π-conjugated segment, regulated by organo-silicon units, shows two strong absorption bands around 312 and 352 nm, corresponding to the π-π* transition of the carbazole unit and the conjugated segments, resp. The present polymers exhibit two strong photoluminescent peaks, in the blue range of 420-480 nm and the green region of 540 nm. The latter is attributed to the carbazole segment. Their electroluminescence (EL) spectra similarly show two strong emissive bands, in the blue region and the yellow region. The current-voltage (I-V) curve of a typical light-emitting device fabricated with a ITO/PVK/PPV/Al/Ca glass structure shows a typical rectifying characteristic with a threshold voltage of 12 V.
Hit Structure

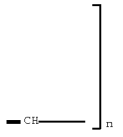
CAS Registry Number
169575-49-7 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene(diphenylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A

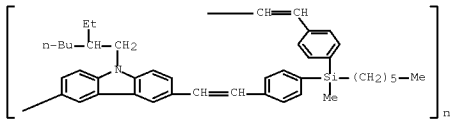


PAGE 1-B



CAS Registry Number
169576-01-0 CAPLUS

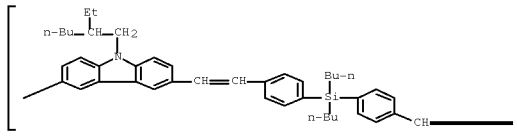
Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene(hexylmethylsilylene)-1,4-phenylene-1,2-ethenediyl] (CA INDEX NAME)



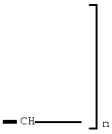
CAS Registry Number
169576-03-2 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene(dibutylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A

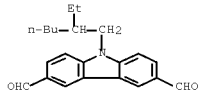


PAGE 1-B



CAS Registry Number
169051-20-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 15 THERE ARE 15 CAPLUS RECORDS THAT CITE THIS RECORD (15 CITINGS)

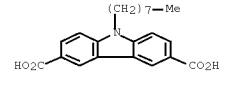
L38 ANSWER 139 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1997:76857 CAPLUS Full-text
Document Number
126:55147
Title
Electroluminescence from carbazole dimers
Author(s)/Inventor
Romero, Danilo B.; Nuesch, Frank; Benazzi, Tayeb; Ades, Didier; Slove, Alain; Zuppiroli, Libero
Patent Assignee/Corporate Source
Physics Dep., Inst. Genie Atomique, Swiss Federal Inst. Technology, Lausanne, CH-1015, Switz.
Source
Advanced Materials (Weinheim, Germany) (1997), 9(15), 1158-1161 CODEN: ADVMEW; ISSN: 0935-9648
Document Type
Journal
Language
English
Abstract
Blue light-emission from a single layer organic LED based on carbazole dimers is reported. The device fabrication including vacuum sublimation of the dimer onto an ITO-covered glass substrate is described and the source of the electroluminescence excitations, and a balanced double-charge injection result in a device with good luminance and modest external quantum efficiencies. One mol. consist of the carbazole with an Et side-group attached at the N site, the other contains an octylside-group and addnl. carbonyle acid end-groups. The device display a narrow electroluminescence band peaking below λ = 420 nm and has a modest external quantum efficiency of 0.07%.
Hit Structure

CAS Registry Number
193921-31-0 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxylic acid, 9-octyl-, dimer (9CI) (CA INDEX NAME)

CM
1

CRN 145145-01-7
CMF C28 H25 N O4



OS.CITING REF COUNT: 61 THERE ARE 61 CAPLUS RECORDS THAT CITE THIS RECORD (62 CITINGS)

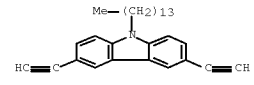
L38 ANSWER 140 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1997:507121 CAPLUS Full-text
Document Number
127:312870
Title
Novel main-chain poly-carbazoles as hole and electron transport materials in polymer light- emitting diodes
Author(s)/Inventor
Tao, X. T.; Zhang, Y. D.; Wada, T.; Sasabe, H.; Suzuki, H.; Watanabe, T.; Miyata, S.
Patent Assignee/Corporate Source
Bio-Polymer Physics Laboratory, The Institute of Physical and Chemical Research (RIKEN), 2-1 Hirosawa, Wako, Saitama, 351-01, Japan
Source
Applied Physics Letters (1997), 71(14), 1921-1923 CODEN: APPLAB; ISSN: 0003-6951
Document Type
Journal
Language
English
Abstract
We report the use of substituted main-chain polycarbazoles as hole and electron transporting polymers for electroluminescence (EL) applications. The polymers are soluble in common organic solvents and high quality thin films are obtained by spin-coating method. A single layer of hole or electron transfer devices with indium tin oxide anode and aluminum cathode shows current densities up to 40-60 mA/cm2, resp., but no visible emission from either layer. Double-layer structures, combining the hole and electron transfer polymers show strong emission originated from the electron transfer layer. The peak of double-layer EL spectrum is about 30 nm red shifted to the peak of corresponding photoluminescence spectrum, which may be due to the formation of an exciplex between the two layers.
Hit Structure

CAS Registry Number
197311-93-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-diethynyl-9-tetradecyl-, homopolymer (CA INDEX NAME)

CM
1

CRN 169740-71-8
CMF C30 H37 N

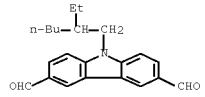


OS.CITING REF COUNT: 23 THERE ARE 23 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)

L38 ANSWER 141 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1997:306453 CAPLUS FullNet
Document Number
127:108631
Title
Synthesis and electroluminescent property of a new conjugated polymer based on carbazole derivative: poly(3,6-N-2-ethylhexyl carbazolylcyanoterephthalidene)
Author(s)/Inventor
Lee, Ji-Hoon; Park, Jong-Wook; Choi, Sam-Kwon
Patent Assignee/Corporate Source
Department of Chemistry, Korea Advanced Institute of Science and Technology, 373-1 Kusung-Dong, Yusung-Gu, Taejon, 305-701, S. Korea
Source
Synthetic Metals (1997), 88(1), 31-35 CODEN: SYMEDZ; ISSN: 0379-6779
Document Type
Journal
Language
English
Abstract
A new green electroluminescence polymer, poly(3,6-N-2-ethylhexyl carbazolylcyanoterephthalidene), was synthesized by condensation polymerization employing the Knoevenagel reaction. The resulting polymer has relatively high mol. weight (Mn = 2.7 × 10⁴), exhibits good solubility in common organic solvents such as chloroform, THF, etc., and has good stability in air. This polymer is also easily cast on glass plate to give yellow-colored film. The structure of the resulting polymer was identified by 1H, 13C NMR, FT-IR and UV-Vis spectroscopies. The UV-Vis spectrum of the polymer in chloroform exhibits characteristically a broad absorption band at 360-500 nm which is due to the π-π* transition of the conjugated double bond. This polymer shows photoluminescence around λmax = 525 nm (exciting wavelength, 410 nm) and green electroluminescence around λmax = 510 nm. The current-voltage (I-V) curve of the polymer shows typical rectifying diode characteristics. In the Al/polymer/ITO device.
Hit Structure

CAS Registry Number
169051-20-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)

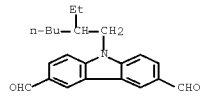


CAS Registry Number
169051-21-2 CAPLUS

Chemical or Trade Name
1,4-Benzenediacetonitrile, polymer with
9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

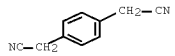
CM
1

CRN 169051-20-1
CMF C22 H25 N O2



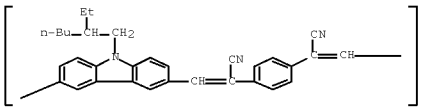
CM
2

CRN 623-75-3
CMF C10 H8 N2



CAS Registry Number
192446-73-4 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)(2-cyano-1,2-ethenediyl)-1,4-phenylene(1-cyano-1,2-ethenediyl)] (9CI) (CA INDEX NAME)

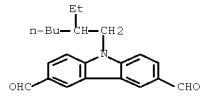


OS.CITING REF COUNT: 49 THERE ARE 49 CAPLUS RECORDS THAT CITE THIS RECORD (49 CITINGS)

L38 ANSWER 142 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1997:224310 CAPLUS FullNet
Document Number
126:236127
Title
Novel poly(p-phenylenevinylene)-related polymers containing organosilyl and carbazole units for blue light-emitting diodes
Author(s)/Inventor
Ryu, Mi-Kyung; Kim, Ki-Dong; Lee, Ji-Hoon; Lee, Soo-Min; Kim, Hwan Kyu
Patent Assignee/Corporate Source
Dep. Macromolecular Sci., Hannam Univ., Taejon, 300-791, S. Korea
Source
Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1997), 38(1), 419-420 CODEN: ACPPAY; ISSN: 0032-3934
Document Type
Journal
Language
English
Abstract
The Si-containing poly(p-phenylene-vinylene)-related polymers were synthesized using known Wittig reaction between the N-(2-ethylhexyl)-3,6-diformylcarbazole monomer and the appropriate diphosphonium salts. The resulting polymers were highly soluble in common organic solvents and they could be spin-cast onto glass plate to give highly transparent homogeneous thin films. The number-average mol. weight of the resulting polymers is 1500-2000, associate with a polydispersity range of 2.6 to 3.6. The polymers have strong UV absorption bands around 295-383 nm. The photoluminescence and electroluminescence spectra appeared around 432-480 nm in the blue emission region, due to the interruption of the regular, pi-conjugated system by organosilicon unit.
Hit Structure

CAS Registry Number
169051-20-1 CAPLUS

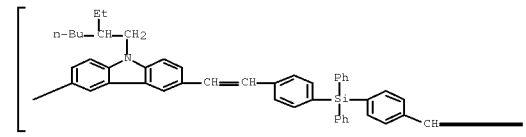
Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)



CAS Registry Number
169575-99-3 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethanediyl-1,4-phenylene(diphenylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

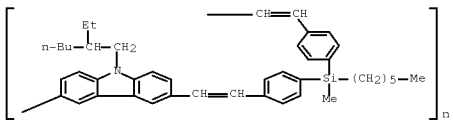
PAGE 1-A



PAGE 1-B

CAS Registry Number
169576-01-0 CAPLUS

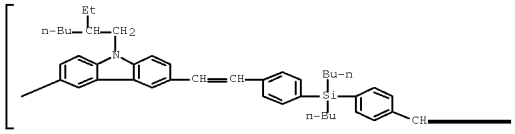
Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene(hexylmethylsilylene)-1,4-phenylene-1,2-ethenediyl] (CA INDEX NAME)



CAS Registry Number
169576-03-2 CAPLUS

Chemical or Trade Name
Poly[(9-(2-ethylhexyl)-9H-carbazole-3,6-diyl)-1,2-ethenediyl-1,4-phenylene(dibutylsilylene)-1,4-phenylene-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



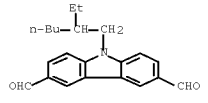
PAGE 1-B

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 143 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1997:84752 CAPLUS FullNet
Document Number
126:172205
Title
An alternating copolymer for a blue light-emitting diode
Author(s)/Inventor
Kim, J. K.; Hong, S. I.; Cho, H. N.; Kim, D. Y.; Kim, C. Y.
Patent Assignee/Corporate Source
Polymer Materials Laboratory, Korea Institute Science Technology, Seoul, 130-650, S. Korea
Source
Polymer Bulletin (Berlin) (1997), 38(2), 169-176 CODEN: POBUDR; ISSN: 0170-0839
Document Type
Journal
Language
English
Abstract
An alternating copolymer composed of 9,9'-dihexylfluorene and N-(2-ethylhexyl)carbazole was synthesized to use as an emissive polymer in a light-emitting diode (LED). The copolymer is soluble in organic solvents and spin-cast to make a fine film. An LED fabricated by sandwiching the alternating copolymer between indium-tin oxide and Al emits a white color with the full width at half maximum of 150 nm. The electroluminescence spectrum becomes simplified to have an emission peak at 480 nm for fine blue color when the copolymer is blended with poly(vinylcarbazole) with a ratio of 1 to 4 before the use as an emissive layer. The forward bias turn-on voltage for the LED is 13, and quantum efficiency is 0.002%.
Hit Structure

CAS Registry Number
169051-20-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)

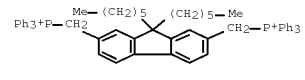


CAS Registry Number
107146-76-3 CAPLUS

Chemical or Trade Name
Phosphonium, [(9,9-dihexyl-9H-fluorene-3,7-diyl)bis(methylene)]bis[triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

CRN 107146-74-1
CMF C63 H66 P2 . 2 Br



●2 Br⁻

CM

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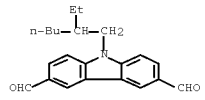
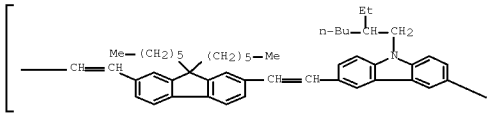
CRN 169051-30-1
CMF C22 H25 N O2



CAS Registry Number
167146-79-4 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl-1,2-ethanediyl][9,9-dihexyl-
9H-fluorene-2,7-diyl-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



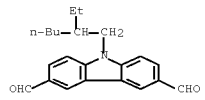
PAGE 1-B

OS.CITING REF COUNT: 36 THERE ARE 36 CAPLUS RECORDS THAT CITE THIS RECORD (36 CITINGS)

L36 ANSWER 144 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1998:691245 CAPLUS DuPont
Document Number
129:178642
Title
New type electroluminescent polymers based on carbazole derivatives
Author(s)
Inventor
Park, J. W.; Lee, J. C.; Lee, J. H.; Cho, S. K.
Patent Assignee(s)
Corporate Source
R&D Center, Samsung Display Devices, Suwon, 442-390, S. Korea
Source
Inorganic and Organic Electroluminescence, [International Workshop on Electroluminescence], 6th, Berlin, Aug. 13-15, 1996 (1996), 235-238. Editor(s): Mauch, Reiner H.; Gumlich, Hans-Eckhart. Wissenschaft und Technik: Berlin, Germany. CODEN: 63GXAW
Document Type
Conference
Language
English
Abstract
The authors describe here the electroluminescence properties of new type partially conjugated polymer which has cyano (electron transport part) and carbazole moiety (hole transport part). This polymer shows photoluminescence around λmax = 525 nm(exciting wavelength = 410 nm) and electroluminescence around λmax = 510 nm. The authors also synthesized and characterized the new electroluminescent polymer based on carbazole derivative containing saturated aliphatic group in the polymer main chain. This polymer shows photoluminescence around λmax = 516 nm(exciting wavelength = 397 nm).
Hit Structure

CAS Registry Number
169051-31-2 CAPLUS

Chemical or Trade Name
1,4-Benzenediacetonitrile, polymer with



CAS Registry Number
101175-48-5 CAPLUS

Chemical or Trade Name
Benzeneacetonitrile, 4,4'-[1,6-hexanediylbis(oxy)]bis-, polymer with
9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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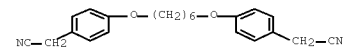
CRN 101175-48-4
CMF C22 H24 N2 O2



CM
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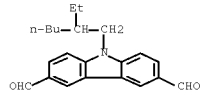
CRN 169051-30-1
CMF C22 H25 N O2



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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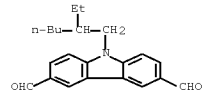
CRN 169051-30-1
CMF C22 H25 N O2



CM
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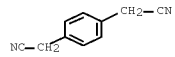
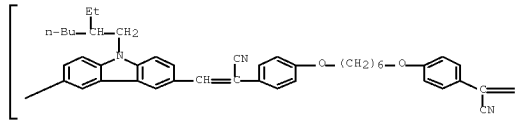
CRN 629-75-3
CMF C10 H6 N2



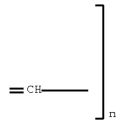
CAS Registry Number
101175-53-1 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethanediyl)-1,4-
phenyleneoxy-1,6-hexanediyloxy-1,4-phenylene(1-cyano-1,2-ethenediyl)]
(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CAS Registry Number
169051-30-1 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-dicarboxaldehyde, 9-(2-ethylhexyl)- (CA INDEX NAME)

CAS Registry Number
101175-49-5 CAPLUS

Chemical or Trade Name
Benzeneacetonitrile, 4,4'-[1,6-hexanediylbis(oxy)]bis-, polymer with
9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
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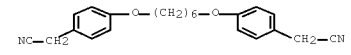
CRN 101175-48-4
CMF C22 H24 N2 O2



CM
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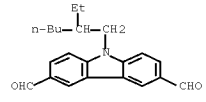
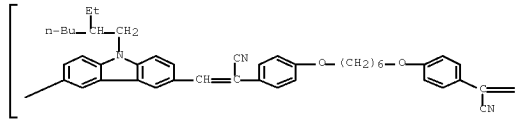
CRN 169051-30-1
CMF C22 H25 N O2



CAS Registry Number
101175-53-1 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)-1,4-
phenyleneoxy-1,6-hexanediyloxy-1,4-phenylene(1-cyano-1,2-ethenediyl)]
(9CI) (CA INDEX NAME)

PAGE 1-A



L36 ANSWER 145 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1996:498146 CAPLUS DuPont
Document Number
125:196548
Title
A new class of electroluminescent polymers based on carbazole derivatives
Author(s)
Inventor
Lee, Ji-Hoon; Park, Jong-Wook; Lee, J. C.; Kim, Hwan-Kyu; Choi, Sam-Kwon
Patent Assignee(s)
Corporate Source
Department Chemistry, Korea Advanced Institute Science Technology, Taejon, 305-701, S. Korea
Source
Polymeric Materials Science and Engineering (1996), 75, 257-258 CODEN: PMSEDG, ISSN: 0743-0515
Document Type
Journal
Language
English
Abstract
An electroluminescent polymer was prepared from N-(2-ethylhexyl)-3,6-diformylcarbazole and 1,6-bis[4-(cyanomethyl)phenoxy]hexane.
Hit Structure

CAS Registry Number
101175-49-5 CAPLUS

Chemical or Trade Name
Benzeneacetonitrile, 4,4'-[1,6-hexanediylbis(oxy)]bis-, polymer with
9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

CM
1

CRN 101175-48-4
CMF C22 H24 N2 O2

CM
2

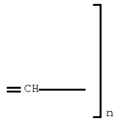
CRN 169051-30-1
CMF C22 H25 N O2

CAS Registry Number
101175-53-1 CAPLUS

Chemical or Trade Name
Poly[[9-(2-ethylhexyl)-9H-carbazole-3,6-diyl](2-cyano-1,2-ethenediyl)-1,4-
phenyleneoxy-1,6-hexanediyloxy-1,4-phenylene(1-cyano-1,2-ethenediyl)]
(9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 146 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
1996:377240 CAPLUS Full-text

Document Number
125:34410

Title
Nitrogenous polymers used as electroluminescent materials

Author/Inventor
Kreuder, Willi; Hoerhold, Hans-Heinrich; Rost, Henning

Patent Assignee/Corporate Source
Hoechst A.-G., Germany

Source
PCT Int. Appl., 38 pp. CODEN: PIXXD2

Document Type
Patent

Language
German

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9610598	A1	19960411	WO 1995-EP3036	19950928
DE 4435047	A1	19960404	DE 1994-4435047	19940930
DE 19505416	A1	19960822	DE 1995-19505416	19950217
EP 783541	A1	19970716	EP 1995-935077	19950928
EP 783541	B1	19990113		
JP 11501955	T	19990216	JP 1995-511305	19950928
US 5874179	A	19990223	US 1997-809772	19970328

Abstract

The electroluminescent polymers I [Ar1-3 are mono- and/or polynuclear aryl and/or heteroaryl groups or C atoms (optionally bridged and/or condensed); Z is a single bond, O, S, SO, SO2, amino, CO, alkenylene, silylene, alkylidene; n = 1-3] have good properties for use in illumination or displays. Vilsmeier polymerization of 3,6-dibenzoyl-9-methylcarbazole (prepared in 79.3% yield from 9-methylcarbazole, BzCl, and AlCl3 in C2H4Cl2 at 0°) with tetra-Et [[2,5-bis(octyloxy)-1,4-phenylene]dimethylene]diphosphonate in the presence of tert-BuOK in refluxing PhMe gave a polymer (II) with glass temperature 90°, fluorescence maximum 505 nm, and mol. weight 11,300. A film of II on In-Zn oxide had maximum efficiency 0.032 and maximum light d. 120 Cd/m2 at 13 V and 7 mA/4 mm2.

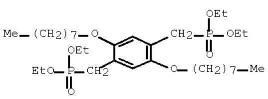
Hit Structure

CAS Registry Number
177961-05-6 CAPLUS

Chemical or Trade Name
Phosphonic acid, [[2,5-bis(octyloxy)-1,4-phenylene]bis(methylene)]bis-, tetraethyl ester, polymer with (9-methyl-9H-carbazole-3,6-diyl)bis[phenylmethanone] (9CI) (CA INDEX NAME)

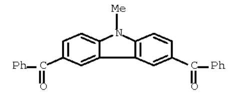
CM
1

CRN 176856-31-8
CMF C32 H60 O8 P2



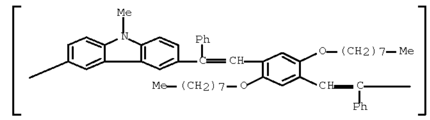
CM
2

CRN 78544-71-5
CMF C27 H19 N O2



CAS Registry Number
177961-06-7 CAPLUS

Chemical or Trade Name
Poly[(9-methyl-9H-carbazole-3,6-diyl)(1-phenyl-1,2-ethenediyl)[2,5-bis(octyloxy)-1,4-phenylene](2-phenyl-1,2-ethenediyl)] (9CI) (CA INDEX NAME)

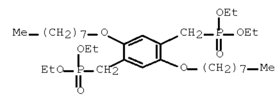


CAS Registry Number
177961-07-8 CAPLUS

Chemical or Trade Name
Phosphonic acid, [[2,5-bis(octyloxy)-1,4-phenylene]bis(methylene)]bis-, tetraethyl ester, polymer with 9-methyl-9H-carbazole-3,6-dicarboxaldehyde (9CI) (CA INDEX NAME)

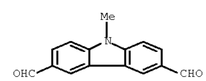
CM
1

CRN 176856-31-8
CMF C32 H60 O8 P2



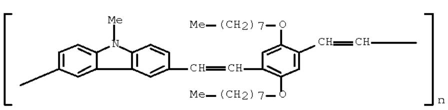
CM
2

CRN 29377-72-8
CMF C15 H11 N O2



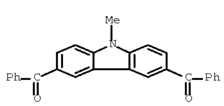
CAS Registry Number
177961-08-9 CAPLUS

Chemical or Trade Name
Poly[(9-methyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl[2,5-bis(octyloxy)-1,4-phenylene]-1,2-ethenediyl] (9CI) (CA INDEX NAME)



CAS Registry Number
78544-71-5 CAPLUS

Chemical or Trade Name
Methanone, (9-methyl-9H-carbazole-3,6-diyl)bis[phenyl- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L38 ANSWER 147 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
1996:168110 CAPLUS Full-text

Document Number
124:246161

Title
Electroluminescent device containing carbazole dimer derivative

Author/Inventor
Himeshima, Yoshio; Kohama, Tooru; Okita, Shigeru

Patent Assignee/Corporate Source
Toray Industries, Inc., Japan

Source
Jpn. Kokai Tokkyo Koho, 17 pp. CODEN: JKXXAF

Document Type
Patent

Language
Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08003547	A	19960109	JP 1995-73529	19950330
JP 3139321	B2	20010226		

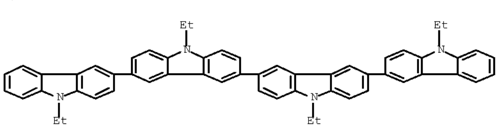
Abstract

The device contains a carbazole dimer derivative I [R1-2 = H, alkyl, halo, aryl, aralkyl, cycloalkyl; carbazolyl frame may be substituted for alkyl, aryl, aralkyl, (substituted) carbazolyl, halo, alkoxy, dialkylamino, trialkylsilyl]. I may be used as a hole-transporting material.

Hit Structure

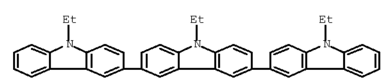
CAS Registry Number
144446-87-7 CAPLUS

Chemical or Trade Name
3,3':6',3'':6'',3'''-Quater-9H-carbazole, 9,9',9'',9'''-tetraethyl- (CA INDEX NAME)



CAS Registry Number
175017-94-4 CAPLUS

Chemical or Trade Name
3,3':6',3''-Ter-9H-carbazole, 9,9',9''-triethyl- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L38 ANSWER 148 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
1995:285575 CAPLUS Full-text

Document Number
122:67876

Title
Electroluminescent phosphors and devices

Author/Inventor
Kikuchi, Norihiro

Patent Assignee/Corporate Source
Canon Kk, Japan

Source
Jpn. Kokai Tokkyo Koho, 22 pp. CODEN: JKXXAF

Document Type
Patent

Language
Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06136360	A	19940517	JP 1992-312618	19921029
JP 3044142	B2	20000522		
JP 2000150164	A	20000530	JP 1999-351379	19991210
JP 3141023	B2	20010305		

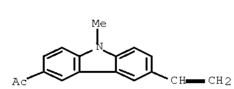
Abstract

The devices contain phosphors from I or Ar(CH:CR3)nCH:CR1R2 [Ar1,2 = (substituted) aromatic group; R = (substituted) alkyl or aralkyl; Ar = (substituted) condensed polycyclic ring; R1-3 = H, (substituted) alkyl, aralkyl, aromatic group; R1 and R2 cannot be H simultaneously; n = 0, 1].

Hit Structure

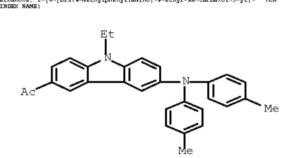
CAS Registry Number
160108-65-6 CAPLUS

Chemical or Trade Name
Ethanone, 1-(6-ethenyl-9-methyl-9H-carbazol-3-yl)- (CA INDEX NAME)



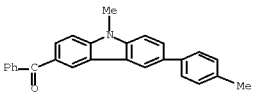
CAS Registry Number
160108-68-9 CAPLUS

Chemical or Trade Name
Ethanone, 1-[6-[bis(4-methylphenyl)amino]-9-ethyl-9H-carbazol-3-yl]- (CA INDEX NAME)



CAS Registry Number
160108-75-8 CAPLUS

Chemical or Trade Name
Methanone, [9-methyl-6-(4-methylphenyl)-9H-carbazol-3-yl]phenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

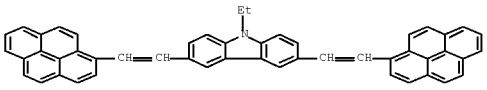
L38 ANSWER 149 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1995:207989 CAPLUS Full text
Document Number
122:201142
Title
Organic field-effect electroluminescent device containing pyrene derivative
Author(s)/Inventor
Nagai, Kazukyo; Ariga, Tamotsu; Adachi, Hiroshi; Sakon, Hiroki; Adachi, Chihaya; Ooka, Masatsumi
Patent Assignee/Corporate Source
Ricoh Kk, Japan
Source
Jpn. Kokai Tokkyo Koho, 16 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06240246	A	19940830	JP 1993-51546	19930217

Abstract
The device has ≥1 organic compound layer containing a pyrene derivative I (Ar = heterocyclic aromatic group; n = 1, 2) between an anode and a cathode. The layer containing I may be an electron-transporting layer or a light-emitting layer. The device showed good durability.
HitStructure

CAS Registry Number
143057-33-4 CAPLUS

Chemical or Trade Name
9H-Carbazole, 9-ethyl-3,6-bis[2-(1-pyrenyl)ethenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 150 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1993:659214 CAPLUS Full text
Document Number
119:259214
Title
Organic electroluminescent device
Author(s)/Inventor
Hosokawa, Chishio; Kusumoto, Tadashi; Matsuura, Masahide
Patent Assignee/Corporate Source
Idemitsu Kosan Co, Japan
Source
Jpn. Kokai Tokkyo Koho, 23 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

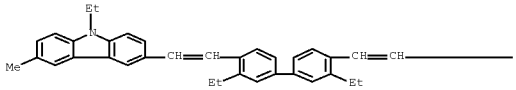
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05194943	A	19930803	JP 1992-203018	19920730

Abstract
The device consists of a hole-injecting material of I or II [R1-2 = C1-10 alkyl, C6-20 aryl, C6-20 alkyl-substituted aryl, C6-20 amino-substituted aryl, C6-20 alkoxy-substituted aryl; R7-8 = H, C1-10 alkyl, C6-20 aryl, C1-10 alkoxy, C6-20 anyloxy; X = Q, Q1-2, naphthalene-1,5-diyl, naphthalene-2,6-diyl, (1,4-C6H4)2O, (1,4-C6H4)2C6H10, (1,4-C6H4)2CMe2; R3-6 = H, C1-10 alkyl, C1-10 alkoxy]. The device showed long luminescent lifetime.
HitStructure

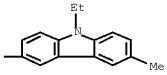
CAS Registry Number
150973-92-5 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,3'-(2,2'-diethyl[1,1'-biphenyl]-4,4'-diyldi-2,1-ethenediyl)bis[9-ethyl-6-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



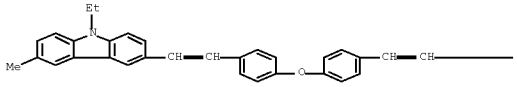
PAGE 1-B



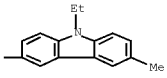
CAS Registry Number
150973-88-1 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,3'-(oxydi-4,1-phenylene-2,1-ethenediyl)bis[9-ethyl-6-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



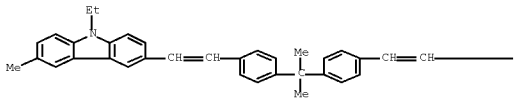
PAGE 1-B



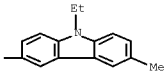
CAS Registry Number
150973-89-2 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,3'-[(1-methylethylidene)bis(4,1-phenylene-2,1-ethenediyl)]bis[9-ethyl-6-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A

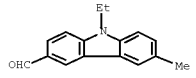


PAGE 1-B



CAS Registry Number
122060-05-3 CAPLUS

Chemical or Trade Name
9H-Carbazole-3-carboxaldehyde, 9-ethyl-6-methyl- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

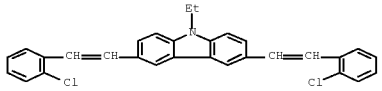
L38 ANSWER 151 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1993:70270 CAPLUS Full text
Document Number
118:70270
Title
Electroluminescent device containing aromatic compound
Author(s)/Inventor
Takahashi, Toshihiko; Ota, Masatsumi; Onuma, Teruyuki; Kawamura, Fumio; Sakon, Hiroki
Patent Assignee/Corporate Source
Ricoh Co., Ltd., Japan
Source
Jpn. Kokai Tokkyo Koho, 13 pp. CODEN: JKXXAF
Document Type
Patent
Language
Japanese
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04194892	A	19920701	JP 1990-314040	19901120
JP 2913516	B2	19990628		

Abstract
Thin film devices comprises ≥1 layer containing an organic compound Ar1R1C:CHXCHCR2Ar2 [X = Q; Ar1-3 = (substituted) carbocyclic aromatic ring and/or (substituted) heterocyclic aromatic ring; R1-3 = H, (substituted) alkyl, (substituted) carbocyclic aromatic ring, (substituted) heterocyclic aromatic ring] sandwiched between an anode and a cathode.
HitStructure

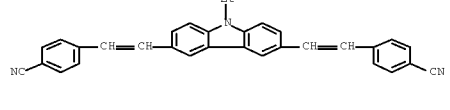
CAS Registry Number
145508-02-9 CAPLUS

Chemical or Trade Name
9H-Carbazole, 3,6-bis[2-(2-chlorophenyl)ethenyl]-9-ethyl- (CA INDEX NAME)



CAS Registry Number
145508-04-1 CAPLUS

Chemical or Trade Name
Benzonitrile, 4,4'-[(9-ethyl-9H-carbazole-3,6-diyl)di-2,1-ethenediyl]bis- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L38 ANSWER 152 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN
Accession Number
1992:85322 CAPLUS Full text
Document Number
116:85322
Title
Electric-field-type electroluminescent device containing electrolytically polymerized layer
Author(s)/Inventor
Onuma, Teruyuki; Suzuki, Tetsuo; Kawamura, Fumio; Ota, Masatsumi; Sakon, Hiroki; Takahashi, Toshihiko
Patent Assignee/Corporate Source

Ricoh Co., Ltd., Japan

Source
Jpn. Kokai Tokkyo Koho, 6 pp. CODEN: JKXXAF

Document Type
Patent

Language
Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03216990	A	19910924	JP 1990-9765	19900119

Abstract
The device has ≥1 organic compound layers containing ≥1 electrolytically polymerized layers between a cathode and an anode. A device containing poly(N,N'-diphenylbenzidine) showed high insulation breakage voltage.

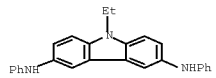
Hit Structure

CAS Registry Number
119546-72-4 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N,N'-diphenyl-, homopolymer (9CI) (CA INDEX NAME)

CM
1

CRN 119546-71-3
CMF C26 H23 N3



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L38 ANSWER 153 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
1991:666364 CAPLUS Full text

Document Number
115:266364

Title
Electroluminescent device

Author(s)/Inventor
Oruma, Tenzyoki; Sakon, Hiroto; Hashimoto, Mitsuru

Patent Assignee/Corporate Source
Ricoh Co., Ltd., Japan

Source
Jpn. Kokai Tokkyo Koho, 6 pp. CODEN: JKXXAF

Document Type
Patent

Language
Japanese

Patent Information

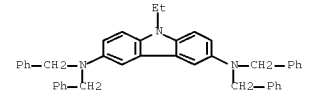
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03054286	A	19910306	JP 1989-189342	19890721
US 5119986	A	19920602	US 1990-541533	19900621

Abstract
The title device, suited for use as a large-area light source, is composed of ≥1 organic layer formed between 2 electrodes, wherein ≥1 of the layers contains, as a hole-transporting material, a compound I (R = H, lower alkyl, lower alkoxy, halogen, NO2; A = II, III, IV; R1 = lower alkyl, (un)substituted aralkyl; R2 = lower alkyl).

Hit Structure

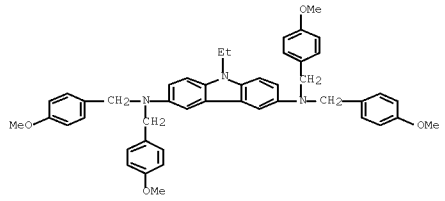
CAS Registry Number
70561-43-9 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3,N3,N6,N6-tetrakis(phenylmethyl)- (CA INDEX NAME)



CAS Registry Number
106572-50-8 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3,N3,N6,N6-tetrakis[(4-methoxyphenyl)methyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L38 ANSWER 154 OF 154 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number
1991:618452 CAPLUS Full text

Document Number
115:218452

Title
Electroluminescent device

Author(s)/Inventor
Oruma, Tenzyoki; Kawamura, Fumio; Ota, Masaburni; Sakon, Hiroto; Takahashi, Toshihiko

Patent Assignee/Corporate Source
Ricoh Co., Ltd., Japan

Source
Jpn. Kokai Tokkyo Koho, 4 pp. CODEN: JKXXAF

Document Type
Patent

Language
Japanese

Patent Information

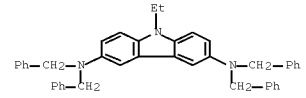
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03035065	A	19910215	JP 1989-168825	19890630
US 5119986	A	19920602	US 1990-541533	19900621

Abstract
The title device, suited for use as a large-area light source, comprises ≥1 organic layer sandwiched between an anode and a cathode, wherein ≥1 of the organic layers contains I [R = alkyl, aryl, (un)substituted aralkyl; R1 = H, alkyl, alkoxy, halogen].

Hit Structure

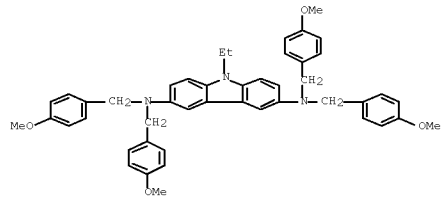
CAS Registry Number
70561-43-9 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3,N3,N6,N6-tetrakis(phenylmethyl)- (CA INDEX NAME)



CAS Registry Number
106572-50-8 CAPLUS

Chemical or Trade Name
9H-Carbazole-3,6-diamine, 9-ethyl-N3,N3,N6,N6-tetrakis[(4-methoxyphenyl)methyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

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